ECHNOLOGY DEPT

NEW EQUIPMENT DIGEST

A Penton Publication

September, 1952

Volume 17—Number 9

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Use Inquiry Slips—Pages 4 and 100

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

LARGE WORK-HOLDING TA
motor-driven table adjus angularly

Holding of work during machining or checking of radial and angular operations is possible with this 48-in. Rotab which fits on machine tools and is also adaptable for other positioning operations. Pushbutton controlled motor drives 45-in. diameter table or faceplate at 5 rpm. Vernier handwheel can be used to select any position within 2 minutes. Faceplate can also be adjusted to any angle from vertical through horizontal to 30 degrees below horizontal and locks in position. Eight 11/16-in. T-slots on plate surface facilitate holding of work. Centering plug and 10-in. sine bar are standard equipment. Made by **Machine Products Corp.**, 6763 E. McNichols Rd., Detroit 12, Mich.

▲ For more details circle **NED-1** on enclosed inquiry slip ▲

TAPPING CHUCK
gives precise control to small taps

Finger tip control tapping chuck is designed for use with the Commander Tapper, and it affords extreme sensitivity and precise control of small taps in high volume production work. In operation, tapping head remains in fixed position and actuation of tap is controlled entirely by operator's fingers. One-eighth turn of collar engages or disengages the tap from the driving mechanism. This enables operator to "feel" action of tap. Vertical movement up to ¾-in. is controlled in this manner. Tap breakage is minimized because operator has full control over tapping and can reverse the tap instantly when necessary. Made by **Commander Mfg. Co.**, 4221 W. Kinzie St., Chicago 24, Ill.

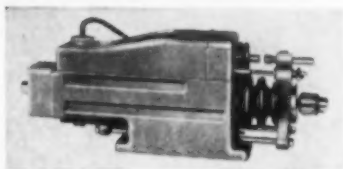
▲ For more details circle **NED-2** on enclosed inquiry slip ▲

CONTACT-MAKING METER
provides both indication and control

This model 1087 direct current switchboard instrument is of contact-making type for indication as well as control applications. It has two adjustable stationary contacts and one contact on pointer. The low and high stationary contacts, mounted on indexes, make or break under direct influence of current in moving coil of instrument which actuates pointer. Each index, independently adjustable, indicates point at which contact operates. Contact ratings are 6-v 0.03-amp dc noninductive. This is ample for actuation of small power or electronic relays. Made by **Weston Electrical Instrument Corp.**, 617 Frelinghuysen Ave., Newark 5, N. J.

▲ For more details circle **NED-3** on enclosed inquiry slip ▲

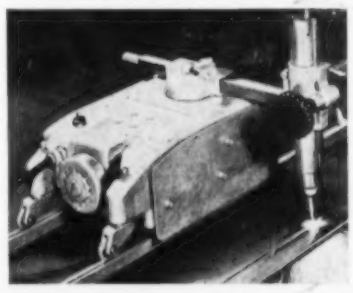
DRILLING-TAPPING UNIT
adaptable to machine set-ups



Having drill capacity in mild steel of 0.013 to 0.25-in., this Locke drilling and tapping unit is compact. Rapid advance and retract are air powered, with feed rate hydraulically controlled. Feed pressure is adjustable from 0 to 3 times applied air pressure which can be up to 200 psi. Spindle is driven electrically with speed adjustable through pulleys from 0 to 8500 rpm. Maximum drill stroke is 3 in., depth accuracy is 0.005-in. with mechanical controls and 0.001-in. with optional electric controls. Latter also permit controlled dwell and automatic drill cleaning cycling for deep-hole drilling. Distributed by **Bellows Co.**, 230 W. Market St., Akron 3, O.

▲ For more details circle **NED-4** on enclosed inquiry slip ▲

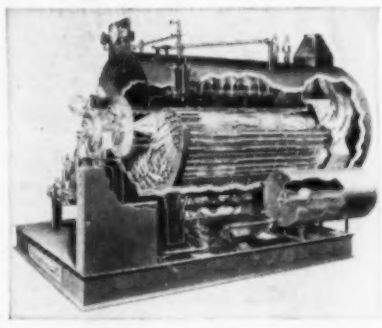
CUTTING MACHINE CARRIAGE
handles metal-cutting blowpipe



Designed for small metalworking plants and to supplement heavier equipment in large plants, Oxweld CM-45 lightweight machine performs straight-line, bevel and circle cutting of metals as well as many welding and flame treating jobs. Complete with blowpipe, it weighs 33¼ lb and can be carried easily. Power is supplied by reversible motor, and centrifugal governor covers stepless speed range of 4 to 32 in. per minute. Other speeds are possible. Starting, stopping and reversing are handled by single control. Bevels can be cut at any angle in straight lines or circles. Diameters from 2 to 54 in. are handled. Made by **Linde Air Products Co.**, Room 308-NED, 30 E. 42nd St., New York 17, N. Y.

▲ For more details circle **NED-5** on enclosed inquiry slip ▲

PACKAGED BOILER UNIT
16 sizes range from 15 to 500 hp



Three-pass internal furnace construction is feature of Powermaster packaged automatic steam generators. Sixteen sizes with ratings of 15 to 500 hp are available for steam pressures up to 250 psi. High heat transfer is assured by design which requires only 4½ to 5 sq ft per boiler horsepower. Veriflow burners for light or heavy oil and commercial gas fuels as well as dual combination burners modulate for efficient operation from 30 to 100 per cent of full load rating. Completely integrated control system and interlocking safety devices are standard. Boiler feed and condensate handling system is optional. Made by **Orr & Sembower, Inc.**, 800 Morgantown Rd., Reading, Pa.

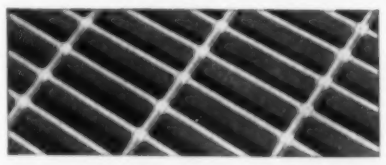
▲ For more details circle **NED-6** on enclosed inquiry slip ▲

PORTABLE ELECTRIC NIBBLER
cuts sheet iron and soft metals

Accurate curves, straight lines, inside cuts or slots are hand-cut readily with GEN-1 Lesto nibbler. This portable tool cuts up to 14-gage metal and operates on either alternating or direct current. Tool head can be turned in 360-degree circle to facilitate cutting in any direction without need for turning housing. This feature permits tool's use in tight spots that are difficult to reach. Distributed by **Victor J. Krieg, Inc.**, 51-A W. 52nd St., New York 19, N. Y.

▲ For more details circle **NED-7** on enclosed inquiry slip ▲

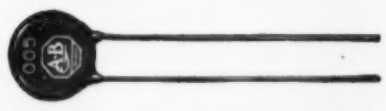
SAFETY METAL GRATING
is of open welded steel design



Featuring round steel cross bars formed to provide peak or crest on top side of bar, Klemp-Krest open welded steel grating is safe to walk on because it is slipproof. Bars are placed at right angles on top of flat bearing bars set on edge and electro-welded. Roundness of bar which forms cross braces between the bearing bars gives high tensile strength and makes a strong weld. Construction also distributes load for added strength. Made by **Klemp Metal Grating Corp.**, 1363 N. Branch St., Chicago 22, Ill.

▲ For more details circle **NED-8** on enclosed inquiry slip ▲

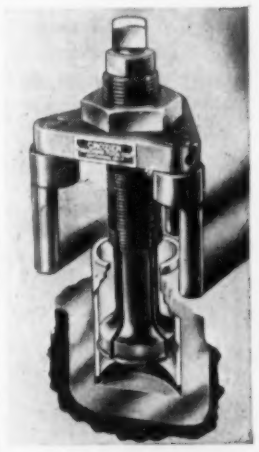
CERAMIC CAPACITORS
range is 0.001 to 0.01-microfarads



Constructed with ceramic disk of high K dielectric and metallic silver plates, line of capacitors has range of 0.001 to 0.01-microfarads. Leads are soldered to silver surfaces, and entire unit is insulated with phenolic resin and wax impregnated to resist moisture. Made by **Allen-Bradley Co.**, 1320 S. Second St., Milwaukee 4, Wis.

▲ For more details circle **NED-9** on enclosed inquiry slip ▲

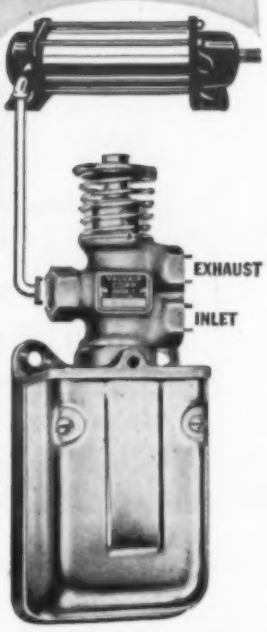
BUSHING & BEARING EXTRACTOR
handles ½ to 2-in. diameter holes



Speedy extraction of bushings, bearings, sleeves, liners, roller bearing cups, magnetic bearing races and similar objects is possible with this extracting device which can handle from ½ to 2-in. inside diameters. Extractor consists of eight threaded expanding arbors, a draw table and sets of short and long legs to adjust distance from work. Maximum of 2½ in. can be drawn at one setting. Press fits of over 5 tons have been extracted. Made by **Crozier Machine Tool Co.**, Prairie Ave., Hawthorne, Calif.

▲ For more details circle **NED-10** on enclosed inquiry slip ▲

This VALVAIR SOLENOID OPERATED AIR CONTROL VALVE is Sensationally Dependable!



. . . and its dependability is due to many quality features. *Examples:* the "O-U" packer, no metal seats, heavy solenoid and standard pipe area through valve, permitting unrestricted air flow. Yet Valvairs cost no more.

For use with air, water or oil pressures up to 175 p. s. i.; temperatures up to 140° F. 2-way, 3-way, 4-way. Also in knob, lever, cam, clevis, foot, treadle, cylinder, diaphragm types.

Sizes: ¼", ⅜", ½", ¾", 1".

Ask for Bulletin N-9.

VALVAIR CORPORATION
Affiliate: Sinclair-Collins Valve Co.
947 Beardsley Ave. • Akron 11, Ohio

REPRESENTATIVES IN PRINCIPAL CITIES

Rely Upon Valvair — 2-WAY — 3-WAY — 4-WAY

▲ For more details circle NED-11 on enclosed inquiry slip ▲

. . . an adjustable Precision Feed Controller

. . . retards the feed speed for ANY PORTION or for ALL of the feed-travel

MAKES EVERY OPERATOR AN "EXPERT"

- Applicable to any feeding mechanism where precision control is desirable.
- Controls the pressure at work surface or at any stage of penetration or approach.
- Increases tool life . . . tools require less frequent sharpening.
- Reduces work rejects . . . insures uniformly clean, high quality work even by the inexperienced.
- Adjustable for from 1 to 1000 lbs. retarding pull. . . . Completely self-contained unit . . . standard unit available in 2", 4", 6" and 8" stroke. Special intermediate strokes obtainable up to 9". . . . Installed by simple bracket mounting . . . actuated by moving element of feed or feed table . . . virtually fool-proof. Inexpensive.

Write for informative bulletin DC-208-A.

NATIONAL PNEUMATIC CO., INC.
125 AMORY STREET, BOSTON 19, MASS.
NEW YORK PHILADELPHIA CHICAGO DETROIT

NP "POWER-CHECK" precision FEED CONTROLLER

* Trade Mark

▲ For more details circle NED-12 on enclosed inquiry slip ▲

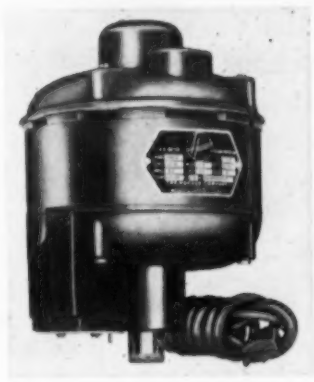
PUBLICIZING NEW PRODUCTS

"How To Get Publicity for Your New Industrial Products" is the title of an 8-page booklet we have published which gives practical guidance in the preparation of acceptable new releases for submission to Business Magazines. If your company has developed some new or improved equipment, machines or materials, you may want one of these publicity guides to help you or your advertising manager prepare suitable copy. It will be sent free upon request. Just drop me a note.

A. N. Gregg
EDITOR

NEW EQUIPMENT DIGEST
417 Penton Building
Cleveland 13, Ohio

SMALL VERTICAL MOTOR dripproof model is rated 1/3-hp



Especially designed for powering sump pumps, this ⅓-hp split-phase motor is completely dripproof. It meets all NEMA mounting dimensions, has heavy duty thrust ball bearing and is designed for direct mounting on support column of pump. Additional features include built-in float switch, rigid coupling, 8-ft rubber covered cord and plug, and automatic thermal protector. Made by **Hoover Co.**, Kingston-Conley Div., 68 Brook Ave., North Plainfield, N. J.

▲ For more details circle NED-13 on enclosed inquiry slip ▲

DRAIN ASSEMBLIES are universally applicable

Composed of various designs of centerpieces or receptacles, top grating and two end pieces, Drain-Master units are universal in their application to drainage installations. Cast iron parts are assembled and drain holes can be supplied in all four sides or bottom to suit needs of installation. They can be used in earth or concrete, and 4-in. flanged outlet allows only liquid to enter, thus preventing clogging of drain tile or pipe. Top grating can be lifted to clean drain. Made by **Standard Foundry Products,** Room 1600, 220 W. 42nd St., New York 36, N. Y.

▲ For more details circle NED-14 on enclosed inquiry slip ▲

Promet Bars Stand Up Where the Going is Tough!

PROMET THE Engineered BRONZE

CORED AND SOLID BRONZE BAR STOCK

Made from Promet No. 6, an outstanding leaded bearing bronze noted for its free machining properties. Unbelievably great resistance to heat and wear. Will not burn, seize, pound out.

PROMET'S HIGH SAFETY FACTOR IS YOUR INSURANCE AGAINST BEARING FAILURE!

Tougher, harder and stronger, it resists shock loads and withstands high compressive forces and will not cut, or stick to the shaft under ordinary operating conditions. There is no seizing, no scoring—just smooth, quiet operation. Will not powder under the most severe conditions of service. When lubrication fails temporarily, Promet carries on safely until proper lubrication can be restored, affording protection against production shutdowns.

PROMET FULLY MACHINED BARS SAVE YOU TIME, TOOLS AND MONEY!

Completely precision machined inside, outside and on the ends, yet sufficient stock remains for the finishing cut. Can be machined at speeds of more than 500 feet per minute—more than double those of phosphor bronzes. This complete machining insures you against subsurface defects sometimes found in rough cast bars. A considerable amount of metal has already been removed—metal which you would be purchasing if you used rough bars. Every bar is absolutely concentric.

Available round, hexagon and square, in 13-inch lengths, rough cast.

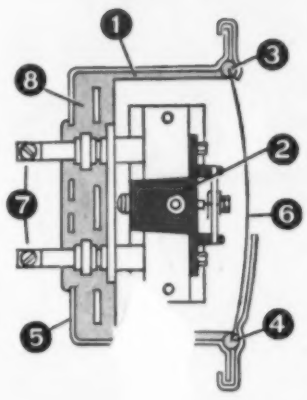
MONEY-BACK GUARANTEE of longer, superior service and lower maintenance cost.

FREE ADVISORY SERVICE
Our competent design and engineering staff will be glad to assist you in solving your special bearing problems. Send today for free literature.

THE AMERICAN CRUCIBLE PRODUCTS COMPANY
1327 Oberlin Avenue Lorain, Ohio
Please send free literature on Promet Cored and Solid Bronze Bar Stock.
NAME .....
FIRM .....
STREET .....
CITY & STATE .....

▲ For more details circle NED-15 on enclosed inquiry slip ▲

Available NOW! RUGGEDIZED METERS to meet Sig. C. Spec. MIL-M-10304



8 PLUS Features

Extra "Ruggedized" Features

1. Movement shock-mounted and housed in rubber-lined case.
2. Movement supported by die-cast frame for strength and accuracy.
3. Glass rubber-grommeted and sealed to rubber lining of case.
4. Non-rigid mounting of glass increases resistance to shock.
5. Each meter designed and built to highest quality standards.

Extra Installation Advantages

6. Slight convexity of glass reduces chance of accidental breakage.
7. Terminals tapped and provided with binding screws to facilitate wiring.
8. Damage in wiring reduced by non-rigid mounting of terminals and flexible conductors.

Building rugge[illegible]ric meters is not new to SUN . . . For over 20 years the automotive inc[illegible] has depended on SUN as one of the largest "D'Arsonval-type" mete[illegible]nufacturers—to produce rugged, tough meters for portable field i[illegible]uments. SUN "Ruggedized" Meters not only meet Specification M[illegible]M-10304 (Sig.C.) —but also embody many *plus* features that make installation easier and faster. "Ruggedized "Meter Data Bulletin on request.

SUN "Ruggedized" Meters are available as D-C Volt Meters, Ammeters, Milli-ammeters and Micro-ammeters and also may be ordered as rectifier type A-C instruments.

6060 NED

SUN ELECTRIC CORPORATION
6389 Avondale Avenue, Chicago 31, Illinois

▲ For more details circle NED-16 on enclosed inquiry slip ▲

BROWNING

First Again!

BROWNING SHEAVES with "UNBREAKABLE" MALLEABLE IRON SPLIT TAPER BUSHINGS

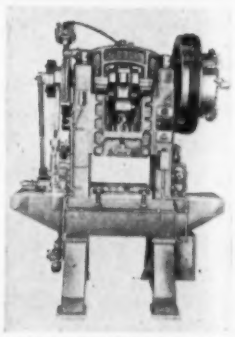
WRITE FOR THE NAME OF THE BROWNING DISTRIBUTOR NEAR YOU

BROWNING MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY, U. S. A.

▲ For more details circle NED-17 on enclosed inquiry slip ▲

modern press engineering + correct die design =

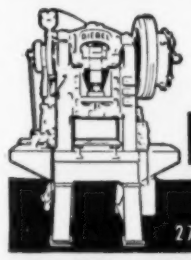
HI-STAMPING PRODUCTION



DIEBEL 40-TON DI-MATIC

- **Positive action air clutch and brake**—accurate stampings up to 360 per minute.
- **Four main bearing crankshaft frame** provides greater rigidity, smoother operation, longer life.
- **Cylindrically shaped slide**—over 380 square inches of guiding surface assures longer press and die life, **less down time.**
- **Air clamped roll feeds** driven by overrunning double ball bearing precision clutch—variable feeds up to 11 inches—easy to set and adjust.
- **Built-in shock absorbers,** minimize vibration, noise and shock to die, press and floor—thus eliminating costly maintenance and repairs.

These outstanding features, plus twelve others, add up to greater profits for you!



For a guide to important savings, write on your letterhead for a new booklet, "Cost Savings thru Precision Stamping"

DIEBEL HI-PRODUCTION AUTOMATIC PRESSES

Di Machine Corp.
2701 W. IRVING PARK ROAD • CHICAGO 18, ILL.

▲ For more details circle NED-18 on enclosed inquiry slip ▲

NEW INDUSTRIAL HUMIDIFIER

BAHNSON TYPE E Self-Contained Unit Humidifier

Requires only water supply and electrical connection

NOTE THESE FEATURES!

- HIGH CAPACITY—Evaporates 3 gallons per hour with ¼ HP motor.
- AUTOMATICALLY CONTROLLED at any desired relative humidity.
- SIMPLE TO INSTALL—Just uncrate and suspend from ceiling.
- ELECTRIC MOTORS for all common current characteristics.
- WATER SUPPLY connection for ¼" tube or ⅛" pipe provided.
- NEEDS NO pump, duct, compressed air, steam, drain or floor space.
- EFFICIENT centrifugal atomization of ordinary city water.
- TWO MODELS, ¼ HP for high capacity, ⅛ HP for small rooms.

FOR COMPLETE HUMIDIFICATION SYSTEMS, FOR BOOSTING, FOR SPOT HUMIDIFICATION, FOR LABORATORIES

FOR TRULY DEPENDABLE LOW-COST HUMIDIFICATION Bahnson Company ENGINEERS AND MANUFACTURERS WINSTON-SALEM, N. C.

For more details circle NED-19 on enclosed inquiry slip

STAK-RAK

stores *MORE* in any storage area!

Complete, selective pipe storage system utilizing maximum of cube.

100% SELECTIVITY

1-man push-button control

Complete pipe handling from railroad car to storage racks is provided in this two-in-one STAK-RAK Crane System. Other existing STAK-RAK installations store palletized bar stock, dies, tote boxes and bins, cellophane rolls and a wide variety of items which require selective storage. Racks are designed to store any type of material.

Write today for catalog and engineering data.

CHICAGO TRAMRAIL CORPORATION
4000 W. Washington Blvd., Chicago 24, Illinois

For more details circle NED-20 on enclosed inquiry slip

NOW...DUMORE TOOLS

put former hand jobs on profitable, production basis

...with hand grinders

Dumore high-speed hand grinders are job-proved for high production grinding . . . from snagging castings to such operations as grinding bullet mold contours (as illustrated). Power-packed motors and perfect balance assure dependable, trouble-free, more profitable service. Choose from five sizes of DUMORE precision-built hand grinders (1/40 to 1/4 HP).

...with Dumore Flex-Shaft tools

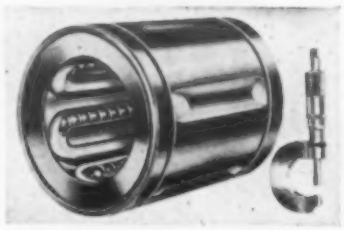
Put the power in your hand and the power plant on the bench with a Dumore Flex-Shaft tool. Get extra control . . . reduce fatigue for steadier production. Made with high quality Dumore motors (1/20 to 1/4 HP), heavy-duty shafts and lightweight handpieces.

Dumore tools are stocked by leading industrial distributors everywhere.

THE DUMORE COMPANY
1333 Seventeenth St., Racine, Wis.

For more details circle NED-21 on enclosed inquiry slip

LARGE LINEAR BALL BEARING accommodates 2½-in. diameter shafts



Applicable to guide rods as well as for machine components involving linear moving shafts, this large size Ball Bushing fits 2½-in. diameter rods. These linear ball bearing units afford long life and precision alignment. Near zero friction minimizes wear and prevents binding or chatter. Made by **Thomson Industries, Inc.,** 1035 Plandome Rd., Manhasset, N. Y.

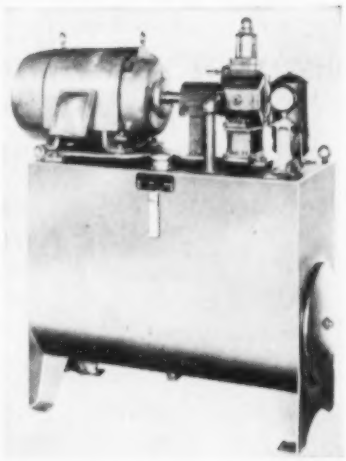
For more details circle NED-22 on enclosed inquiry slip

DRUM OPENER leaves turned-in flange after cut

Hand operated 12-16 model 600 head cutter speedily cuts out head tops of carbide, caustic soda, cyanide, resin, tar, pitch and other one-time-shipper drums and cans of 24 to 30-gage steel. Danger of agitating poisonous or irritating dusts is eliminated. After cut is completed, container has smooth safe turned-in flange. Secondary port hole covers within the head offer no difficulty. Traction is obtained through two drive shafts mounted in bronze bearings. Cutting and roller wheels have 3 in. diameter. Made by **Michael A. Schinker Mfg. Co.,** 6516 S. Western Ave., Chicago 36, Ill.

For more details circle NED-23 on enclosed inquiry slip

HYDRAULIC POWER UNIT can be engineered to user's needs



Offered in 30, 60 and 80-gal standard sizes, J.I.C. hydraulic power units are assembled with Superdraulic or any other pump specified by the customer. Features of construction include ample floor clearance, large tank cleanouts in both ends, sight gages, filler and bleeder caps on both ends and oil filters. Units can be adapted to include special equipment to suit individual requirements. Made by **Superdraulic Corp.,** 14258 Wyoming Ave., Detroit 4, Mich.

For more details circle NED-24 on enclosed inquiry slip

For Lifting and Holding Heaviest Loads

DUFF-NORTON Ratchet Lowering JACKS

for INDUSTRIAL PLANTS • MILLS • MINES • RAILROADS • CONTRACTORS RIGGERS • TRUCKERS • ETC.

Constructed for long, trouble-free service—smooth action—Duff-Norton Ratchet Lowering Jacks raise loads weighing from 5 to 25 tons from 7½" to 18". Built for rugged use. Many sizes to choose from.

Write for Catalog 203A.

THE DUFF-NORTON MANUFACTURING CO.
Main Plant and General Offices: PITTSBURGH 30, PA.—Canadian Plant: TORONTO 6, ONT.
"The House that Jacks Built"

For more details circle NED-25 on enclosed inquiry slip

make Stronger solder joints Quicker and Cheaper!

Using "Fork" in tight space to "pinpoint" the heat.

IDEAL Thermo-Grip®

STRONGER—resistance heating provides ample concentrated heat—assures full adhesion of solder.

QUICKER—heating begins instantly. No preparation, no pre-heating, no set up.

CHEAPER—no wasted time or current. No chance of melting nearby joints or burning parts. No risky open flame.

Proved by thousands of manufacturers. Sizes for every soldering or brazing job.

Sold through Leading Distributors

"Standard" 1000-Watt Model with "Plier", "Fork" and "Pencil" attachments also available.

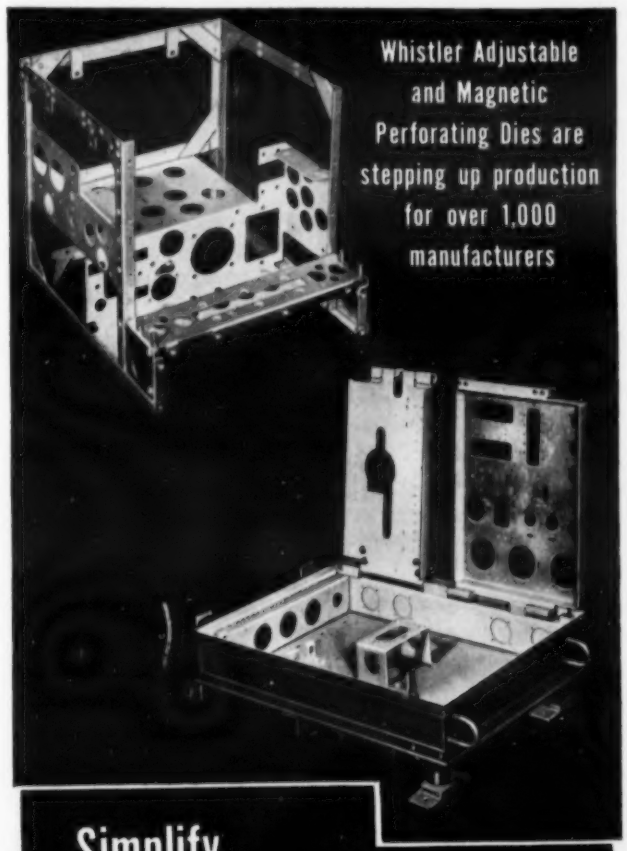
FREE TEST! You Be the Judge

IDEAL INDUSTRIES, Inc. (IDEAL)
1032 Park Avenue
SYCAMORE, ILLINOIS

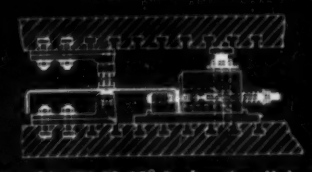
Please arrange FREE Thermo-Grip demonstration and send catalog data.

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE____

For more details circle NED-26 on enclosed inquiry slip



Simplify Complicated Piercing Operations



Use this HU-50 90° Perforating Unit on the same job with other Whistler Dies ...often saves extra press operations.

USE WHISTLER Adjustable and Magnetic Dies for perforating, notching and slotting sheet metals... fast, accurate and cost cutting. Complicated patterns can be set up quickly. Hole arrangements can be changed in the press...without waiting and at no extra die cost. New HU-50 units, that pierce at 90° angle, can be used in conjunction with standard perforating equipment. Fewer press operations are necessary.

Re-use the same dies in different arrangements on many jobs. Punches and dies are interchangeable.

Whistler Adjustable Dies can be used in practically every type press. Standard sizes and shapes of punches and dies available up to 3 inches. Special sizes and shapes to order.

S. B. WHISTLER & SONS, INC.

750 Military Road
Buffalo 23, N. Y.

For prices and application data on this modern way to speed production and cut unit costs, write for these illustrated Whistler catalogs.

For more details circle NED-27 on enclosed inquiry slip

STEEL

Every Kind

Some steel products are in short supply but over-all stocks are still large, diversified

NEARBY STOCKS INCLUDE:

BARS—carbon & alloy, hot rolled & cold finished
STRUCTURALS—channels, angles, beams, etc.
PLATES—U. M. & sheared, Inland 4-Way Floor Plate
SHEETS—hot & cold rolled, many types & coatings
TUBING—seamless & welded, mechanical & boiler tubes
STAINLESS—Allegheny sheets, plates, bars, tubing, etc.
REINFORCING bars & access.
BABBITT bearing metal
MACHINERY & TOOLS for metal fabrication

RYERSON

Joseph T. Ryerson & Son, Inc. Plants: New York, Boston, Philadelphia, Detroit, Cincinnati, Cleveland, Pittsburgh, Buffalo, Chicago, Milwaukee, St. Louis, Los Angeles, San Francisco
Spokane, Seattle

For more details circle NED-28 on enclosed inquiry slip

GEOPHONE*

Does Away With Costly, Old-Fashioned Methods of Locating Leaks!

- MONEY-SAVING
- ACCURATE
- FAST

* The Globe Geophone scientifically and accurately locates water and steam leaks. There's no costly, time-consuming excavation when a Geophone is used. A compact and sensitive instrument operating on the principles of the seismograph and stethoscope, the Geophone picks up and detects, even when 50 to 75 ft. away, the vibrations of the pipe break, and locates it accurately within a few minutes.

The Geophone is indispensable for Water Departments and Industrial Plants. Used also with spectacular results in mining, oil and termite fields.

Complete Geophone outfit consists of connecting tubes, two Geophone discs, headpiece and heavy leather-covered carrying case with shoulder strap. **$85**

Pipe Phones $3.70 (Aquaphone)

Globe Phone Mfg. Corp. READING, MASS. Dept. N

Manufacturers of Geophones Since 1918
*Registered in United States Patent Office

For more details circle NED-29 on enclosed inquiry slip

YOU GET 10 BIG ADVANTAGES WITH CHROMALOX *Electric* RADIANT HEATERS

1. IT'S COLOR BLIND FAR INFRARED
2. UNIFORM HEAT—NO HOT SPOTS
3. BUILT TO TAKE A BEATING
4. HIGH INTENSITY RADIATION
5. QUICK WARM UP
6. UNIQUE 0-100% ADJUSTABLE HEAT OUTPUT
7. ADDED SAFETY WITH VOLATILES
8. FOCUSSED RADIATION
9. EASY OVEN BUILDING
10. SPACE SAVING

Want to know more about this **FLEXIBLE HEAT SOURCE?**

Send for Bulletin CS-604. It shows you why and how Chromalox Radiant Heaters do a better job of baking, drying, curing, etc.

IB-28

Industrial Radiant Heating Division
EDWIN L. WIEGAND CO., 7509 THOMAS BLVD., PITTSBURGH 8, PA.

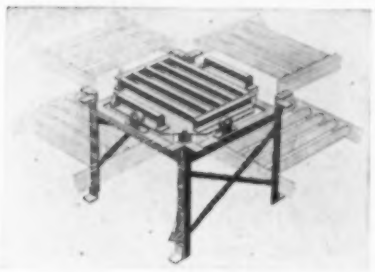
See other advertisement on page 75.

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-30 on enclosed inquiry slip

ROLLER CONVEYOR TURNTABLE changes package, carton direction

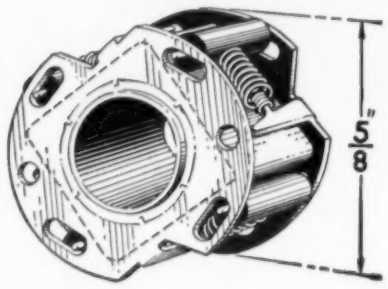


Designed for incorporation into roller gravity conveyor systems, this heavy duty roller turntable makes possible change in direction of packages, cases or cartons being processed during production or shipping. Unit consists of roller section and two auxiliary rolls. Swivel section revolves on casters on center point. Foot treadle is provided to lock turntable for flow in one direction. Made by **Lamson Corp.**, 2000 Lamson St., Syracuse 1, N. Y.

For more details circle NED-31 on enclosed inquiry slip

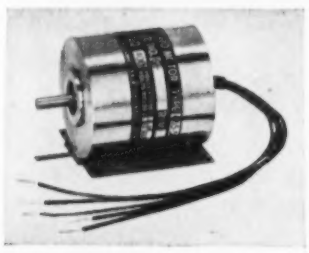
SMALL OVER-RUNNING CLUTCH offered in 13/16 to 2-in. diameters

Featuring infinitely adjustable ratchet feed, automatic cycling mechanism, free-wheeling of high inertia parts and selective coupling, Miniclutch miniature one-way roller clutch is suitable for such equipment as recording instruments, business machines, servo mechanisms and control devices. It has four rollers preloaded with separate springs and is assembled as unit. Three sizes have 10 to 450 oz-in. torque ratings and diameters range from 13/16 to 2 in. Outer housings and shafts can be engineered to conform to user's needs. Made by **High Precision Inc.**, 373 Morse St., Hamden, Conn.



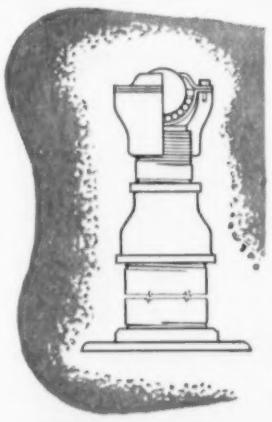
For more details circle NED-32 on enclosed inquiry slip

PRECISION SERVO MOTORS for 60 to 400-cycle service



Having diameter of 1.7 in. and only 1¾ in. long, line of precision servo motors is available for frequencies from 60 to 400 cycles and in two, four and eight-pole constructions. Stall torque is approximately 2 oz-in. Housings can be stainless steel or aluminum. Output shaft, with or without pinion, can be supplied to specifications. Motors will meet rigid military specifications with regard to humidity, temperature, range, vibration and altitude. Made by **G-M Laboratories, Inc.**, Dept. K, 4300 N. Knox Ave., Chicago 41, Ill.

For more details circle NED-33 on enclosed inquiry slip

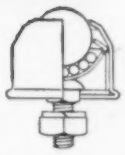


Logan Ball Pedestal units consist of a large steel ball which rotates on a bed of smaller balls contained in a hardened steel cup with semi steel housing.

BALL PEDESTAL

Logan Ball Pedestals are particularly adapted to handling sheets or plates around shears and punch presses or other machines. The ball units permit turning or moving the plates in any direction and the pedestal construction provides a means of conveying without blocking the working area.

Logan offers Ball Pedestal units in several different sizes. Further information on request.



Ball Transfer units also available for table mounting.

Logan Conveyors

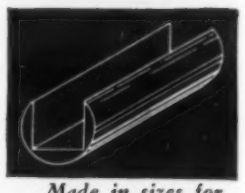
LOGAN CO., 215 CABEL ST., LOUISVILLE, KY.

For more details circle NED-34 on enclosed inquiry slip

Lower TOOLING COSTS WITH SLOTTED SLEEVES

An Easy Method of Installing Tool Bits In Boring Bars, Tool Holders and Cutter Heads

No longer is it necessary to spend hours in filing square or rectangular holes when installing tool bits in boring bars, tool holders and cutter heads. With "Novi" Slotted Sleeves, you just ream a hole to fit the sleeve. Then drill and tap two more holes—one to hold the tool in place and the other for adjustment. All done in a matter of minutes!



Made in sizes for tool bits 3/16" to 1" wide and 1" to 4" long

Write for Literature

Some Territories Still Open to Jobbers

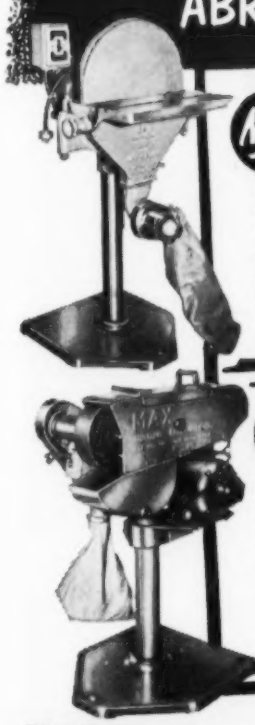
NOVI TOOL & MACHINE CO.

43043 Grand River Novi, Mich.

Novi SLOTTED SLEEVES

For more details circle NED-35 on enclosed inquiry slip

TWO NEW LOW COST ABRASIVE MACHINES



MAX 20" DISC SANDER AND GRINDER

The Max 20" Disc Sander is a larger version of the nationally popular Max 16" Disc Sander which has been serving industry over the past 14 years.

Outstanding features include a table that can be raised, lowered and tilted; trunnions and locks at both ends; a perfectly balanced disc; a guard over the disc, and a dust chute. Write for full particulars on this outstanding machine.

MAX ABRASIVE BELT GRINDER

Proved in the toughest kind of service, this sturdy belt grinder offers all the advantages of abrasive belt grinding in a compact unit at a very low price.

Built for continuous high speed operation using oversized ball bearings and all cast iron construction.

A general purpose grinder that cannot be beat for fast cutting and low maintenance.

By the makers of the famous line of ACME SAW SHARPENERS

MAX MANUFACTURING CO. 138 Stockton Ave., San Jose, Cal.

For more details circle NED-36 on enclosed inquiry slip

Zooms Truck Efficiency from 20% to 90%!

MOTOROLA 2-WAY RADIOS Triple Production

Uni-Channel Sensicon Dispatcher—use it as fixed or mobile station. Sealed-in selectivity ends 15 costly tuning adjustments forever.

Thompson Products, Inc. of Cleveland found that fork-lift truck efficiency jumped from a low of 20% to an average of 92% when Motorola 2-way radios were used. Savings in man-hours alone paid for the sets in only 6 months—and tripled their daily truck output!

Motorola Communications & Electronics Division, 4545 Augusta Blvd., Chicago 51, Illinois; Rogers Majestic Ltd., Toronto, Canada

For more details circle NED-37 on enclosed inquiry slip

FIRST CLASS
PERMIT NO. 36
Sec. 34.9 P. L. & R.
Cleveland, Ohio

BUSINESS REPLY ENVELOPE
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NEW EQUIPMENT DIGEST
Penton Building
CLEVELAND 13, OHIO

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Principal Products Manufactured .....

..... Approximate Number of Employees in Plant .....

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Have You Filled In Your Name and Address?

FOLD TO THIS LINE

To obtain additional information on any items in this issue of NEW EQUIPMENT DIGEST, circle numbers below which correspond with those of desired items. Your request will be forwarded promptly to manufacturer. Please give your name, title, company and address. This postage-free mailer should be folded as indicated for mailing.

	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
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—USE THIS SLIP FOR SEPTEMBER 1952 ISSUE ONLY—

92

NAME ..... TITLE .....

COMPANY ..... Approx. Number of Employees .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

With R-B equipment you save "time on the board" because you are working with a standardized tooling concept. You can select either a catalog item or design specials to meet your sheet metal piercing specifications. The same basic design principles inherent in R-B standard punches, die buttons and retainers can be applied to all your special requirements.

Tool standardization is the basis for efficient and economical production. With R-B you get the accepted standard of the sheet metal industry—in standard design features that save in engineering, die construction and operation.

For further information on how you can save time in die designing write to—

ALLIED PRODUCTS CORPORATION
RICHARD BROTHERS DIVISION
DEPT. 64 • 12629 BURT ROAD • DETROIT 23, MICHIGAN

▲ For more details circle NED-38 on enclosed inquiry slip ▲

NEW CLOTH SCREEN DUST FILTER
provides continuous and uniform suction

After extensive laboratory tests and observance of over 30 units in actual operation for the collection of a large variety of dust in various industries, the W. W. Sly Manufacturing Co. of Cleveland, Ohio, is now promoting the sale of a cloth type dust filter which offers a number of advantages, over existing units, such as: (1) constant uniform suction at the dust source, (2) no mechanical shaking, (3) continual cleaning of the filter bags, and (4) longer bag life.

The usual sheet metal case contains a number of cloth filter bags. A fan creates the suction which draws the dust-laden air into the case. The air passes through the filter bags which retain the dust.

In order to maintain peak efficiency, the dust must be removed from the filter cloth. Here's how it's done (patented): With the filter case under suction, a device which travels back and forth over the open ends of the filter bags, has a flexible hose leading to the outside of the filter case. The suction on the case will draw atmospheric air up into the traveling device and in reverse direction through the filter bag which happens to be opposite the device. This reverse flow of air removes the dust from that bag and lets it drop into the hopper under the filter case.

The cleaning device travels back and forth at the rate of about 3 ft. per minute, so that each bag in a 12 ft. long filter case will be cleaned about once every four minutes. Thus the filter bags will be cleaned constantly. This will permit the passage of air through the cloth to be maintained at a uniform rate, causing a uniform suction at the dust points. This is of particular importance where a dust filter is used on a process job, where uniform suction is of importance for maintaining a uniform rate of production, either as to fineness or quantity of product, or both.

This new dust collector is called the SLY DYNACLONE. The principle of operation of this SLY DYNACLONE is described in Bulletin 101. Requests for this bulletin and information on application of this design should be addressed to **The W. W. Sly Manufacturing Co.**, 4748 Train Ave., Cleveland 2, Ohio.

Advt.

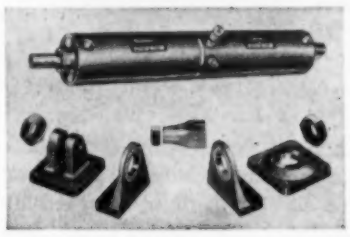
▲ For more details circle NED-39 on enclosed inquiry slip ▲

FIRE SHIELD
protects firefighters from heat

Made of Ultralite glass fiber insulation over tubing framework, this 26-lb fire shield enables firefighters to approach within a few feet of a fire with effective protection against radiant heat. At close quarters, user can direct operations, turn-off valves, effect a rescue or fight fire. Heat-dissipating copper wire shielded peep hole at eye level permits vision through shield. Developed by **Gustin-Bacon Mfg. Co.**, Dept. H, 210 W. Tenth St., Kansas City, Mo.

▲ For more details circle NED-40 on enclosed inquiry slip ▲

AIR-HYDRAULIC CYLINDER
forward or reverse stroke regulated



Offered in 2 and 3-in. standard bore sizes, this air-hydraulic cylinder is adaptable for powering tools or work in machining operations, to permit rapid traverse, afford finely controlled movement during work operation and fast reverse action. Interchangeable mounting brackets provide versatility of application. Shop air pressure is used to actuate the cylinder, while built-in hydraulic system furnishes positive regulation of forward or reverse stroke movement by adjustment of speed control. Made by **Modernair Corp.**, Dept. NED, 400 Preda St., San Leandro, Calif.

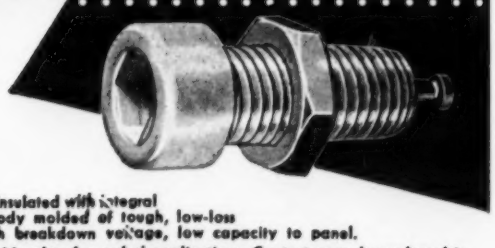
▲ For more details circle NED-41 on enclosed inquiry slip ▲

POWER SAW ATTACHMENT
fits on 5-hp Gravely tractor

Employing a 26-in. diameter circular saw blade or a heavy duty 24-in. chain saw, this power saw drive fits company's 5-hp tractors. This combination provides effective tools for felling, clearing and cutting timber and reclaiming ground. Operator is always in safe, comfortable standing position. Saw can be adjusted to cut at any angle from horizontal to vertical. Made by **Gravely Motor Plow & Cultivator Co.**, Box 80, Dunbar, W. Va.

▲ For more details circle NED-42 on enclosed inquiry slip ▲

new JOHNSON nylon tip jacks



Completely insulated with integral head and body molded of tough, low-loss Nylon. High breakdown voltage, low capacity to panel.

Furnished in 11 colors for coded applications. Contact securely anchored in jack body, recessed to avoid accidental contact. Phosphor bronze and beryllium copper contacts, both silver plated. Solder terminal hot tin dipped.

Mating plug firmly engaged with virtually all its surface area in contact with jack, assuring low, stable contact resistance. Jack body threaded ¼"-32, mounted by single nickel plated brass nut.

SPECIFICATIONS

DC breakdown, 11,000 volts
Nominal capacity to ⅛" panel, 2.0 mmf.
Mating pin, .081" diameter
Mounting hole required, 17/64"
Head diameter, ⅜"
Insulating hardware required, NONE

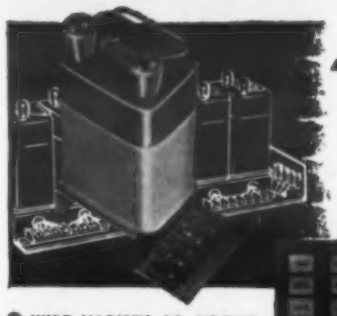
BERYLLIUM COPPER CONTACTS Cat. No.	PHOSPHOR BRONZE CONTACTS Cat. No.	Color
105-601-1	105-601-2	White
105-602-1	105-602-2	Red
105-603-1	105-603-2	Black
105-604-1	105-604-2	Dark Green
105-605-1	105-605-2	Light Blue
105-606-1	105-606-2	Orange
105-607-1	105-607-2	Yellow
105-608-1	105-608-2	Brown
105-609-1	105-609-2	Light Green
105-610-1	105-610-2	Dark Blue
105-611-1	105-611-2	Ivory

We would like to present you with samples of these outstanding jacks. Write us on your letter head requesting 105- M9

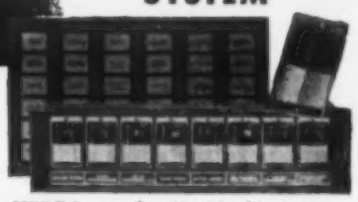
E. F. JOHNSON CO.
Waseca, Minnesota

JOHNSON

▲ For more details circle NED-43 on enclosed inquiry slip ▲



New TEL-ALARM "Unitized" ANNUNCIATOR SYSTEM



- WIDE VARIETY OF CIRCUIT ARRANGEMENTS TO MEET ANY NEED
- HERMETICALLY SEALED UNITS—CORROSION PROOF
- BACKLIGHTED NAMEPLATES OR TURRET LENSES
- STANDARDIZED FOR EASY USE—LOWER COST

HERE is the first "unitized" annunciator. Tel-Alarm incorporates a basic relay unit with many different circuit arrangements available because of a unique switchboard circuit-header. Tel-Alarm is completely standardized for low cost and easy maintenance.

Tel-Alarm is corrosion proof, hermetically sealed and meets any Class I, Division 2 application. The units are completely self-contained — no complicated wiring—and merely plug into a standard Tel-Alarm chassis. Simple and easy to install.

You can get backlighted nameplates or the new Tel-Alarm *giant* turret lenses for greater visibility. Check into Tel-Alarm today.

Send for your free copy of Bulletin 440
Contains complete circuit sequence diagrams, full range of models for every need.

Tigerman Engineering COMPANY
4332 North Western Ave., Chicago, Ill.
"Protecting America's Industry"

▲ For more details circle NED-44 on enclosed inquiry slip ▲

NOW! Up to 6 Records of pH on one round chart!

● With but one instrument and one pH amplifier, records of as many as six pH measurement points may now be obtained on a *single round chart*. This means initial savings as high as 60% or more, as well as greatly simplified installation. The instrument which makes this possible is the new and altogether unique Foxboro Multi-Record Dynalog* Electronic Recorder. Supplied with flow-type or immersion-type electrodes. Foxboro Recording Controllers also available.

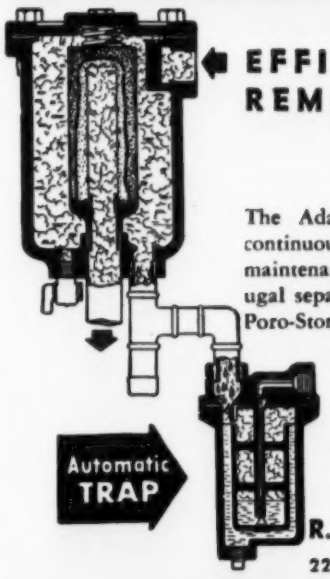
The Foxboro Company, 1349 Neponset Ave., Foxboro, Mass., U.S.A. Branches in principal cities.

*Reg. U.S. Pat. Off.

FOXBORO Reg. U.S. Pat. Off. pH RECORDERS

▲ For more details circle NED-45 on enclosed inquiry slip ▲

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES:
OIL, WATER
PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 176.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS Poro-Stone AIR FILTER

▲ For more details circle NED-46 on enclosed inquiry slip ▲

Moly-sulfide
A LITTLE DOES A LOT

shows up best where the frictional conditions are difficult

The case-histories of 154 difficult friction problems in the shop and in the field, all successfully solved, are described in a new 40 page booklet. It is where conditions are extreme that *Moly-sulfide* excels over other lubricants. If you encounter extreme conditions of pressure, temperature or velocity, send for this free booklet.

Climax Molybdenum Company
500 Fifth Avenue · New York City 36 · N·Y

MS-9

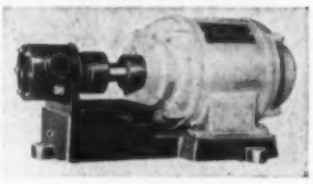
For more details circle NED-48 on enclosed inquiry slip

AIR FLOW SNUBBER
dampens pulsations in compressed air

Controlling slow rate of flow of compressed air or gas for operation of continuous-reading hydrostatic instruments, protection of pneumatic testing and gaging equipment from surge pressures and pulsation dampening for gages, recorders and other instruments are some of the functions of this air flow snubber. Made of brass and with Neoprene O-ring, device has inlet and outlet threaded for ¼-in. pipe. Flow rate is approximately 0.04 cfm at a pressure drop of 70 psi. Maximum pressure is 1000 psi. Made by **King Engineering Corp.**, P. O. Box 530-A, Ann Arbor, Mich.

For more details circle NED-50 on enclosed inquiry slip

IMPELLER PUMP
of hard rubber for handling acids



Although only ¾-in. in size, the Jabsco impeller pump is capable of delivering 15 gpm at 22 ft head or 5 gpm at 72 ft head. Maximum capacities are 95 ft head or 16 gpm. It is available in hard rubber construction for handling either viscous or thin acids, alkalies and other corrosives. Pump is self-priming against suction lifts of 6 ft without a foot valve, and when primed, handles suction lifts as high as 14 ft. The self-lubricating flexible Neoprene impeller is self-compensating for wear. Pump is threaded for ¾-in. standard pipe threads and operates in either direction. Motor is ½-hp, 1140 rpm polyphase, close-coupled with the impeller mounted directly over the Hastelloy motor shaft. Made by **American Hard Rubber Co.**, Dept. NED, 93 Worth St., New York 13, N. Y.

For more details circle NED-51 on enclosed inquiry slip

SELF-CLEANING FILTERS
spray jets removable from outside

Powerful jet sprays inside filter tank which lance filter media and sludge from outer surfaces of filter leaves can now be removed from outside the tank for cleaning. Spray jets are part of removable strainer assembly which is inserted from outside the header. When a jet is clogged, assembly is unscrewed, nozzle is cleaned, and unit is replaced. This design is incorporated in self-cleaning pressure leaf filters made by **Hercules Filter Corp.**, 204-D 21st Ave., Paterson 3, N. J.

For more details circle NED-52 on enclosed inquiry slip

SAVE DESIGN COSTS
PROTECT DELICATE INSTRUMENTS
INCREASE PRODUCTION

figure on AC Line Regulation by SORENSEN

Model 500S

Whether you require line regulation for incorporation in new design, for test installation or for direct application — specify Sorensen electronic regulators. Be assured of economy, accuracy, trouble-free operation.

STANDARD AC SPECIFICATIONS

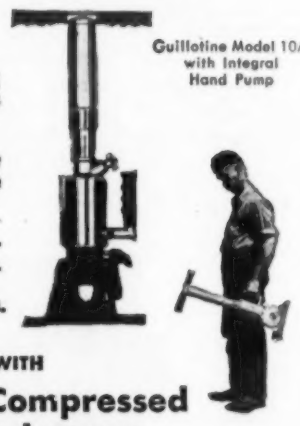
VA capacity	150 500	250 1000	2000 3000	5000 10000	15000
Regulation accuracy	± 0.1% against line or load				
Input voltage	95-130 VAC; also available for 190-260 VAC single phase 50-60 cycles				
Output voltage	Adjustable between 110-120; 220-240 in 230 VAC models				
Load range	0 to full load				

SORENSEN
SORENSEN & CO., INC.
375 Fairfield Avenue
Stamford, Conn.

For more details circle NED-54 on enclosed inquiry slip

NEW

Portable, Hydraulic "GUILLOTINE"
CUTS 1¼" WIRE ROPE!



Guillotine Model 10A with Integral Hand Pump

Tremendous cutting power . . . 22½ tons thrust!

Light weight . . . only 45 lbs. net. Take the tool to the job.

Positive blade retraction . . . will not jam.

Easy hand pump action.

ALSO AVAILABLE WITH
Electric or Compressed Air operated pump

Automatic, power-operated pump assemblies available that are also portable or may be permanently mounted for production application. Special high-power pump available for production cutting over 200 cuts per hour.

Write For Catalog. Dept. NED-9

MANCO MFG. CO.
BRADLEY, ILLINOIS

For more details circle NED-55 on enclosed inquiry slip

Small in Size

BUT BIG IN SAVINGS!

Standard X-WASHERS

Save PRODUCTION Time, Costs and Failures!

● Here's the answer to many a design engineer's prayer for the *right* fastener. You can see with a glance at the diagram below how quickly and easily Standard X-Washers clinch to a positive, 360° closure—how they can be removed just as simply when servicing is required.

Design savings into *your* products, too . . . "design in" Standard X-Washers and you reduce production time, costs and costly failures!

Grooved pins available for all sizes of STANDARD X-WASHERS . . . parallel or headed type pins made to specifications. Send print for prompt quotation.

STANDARD Locknut and Lockwasher, Inc.
510 N. CAPITOL AVE. • INDIANAPOLIS 4, IND.

For more details circle NED-49 on enclosed inquiry slip

Can our product help you improve your product?

This is **INNER-SEAL.** It's extremely durable, extremely effective . . . with many features that eliminate sealing problems in the manufacturing of countless products.

Inner-Seal's bead is of *live sponge rubber* which compresses under pressure, then springs back into shape. Its flange is of *woven spring wire*, tough but flexible enough to fit snugly around corners. Its coating is of *waterproof neoprene* . . . designed for sub-zero or tropical temperatures, sunlight, humidity, grease, oil or abrasion. Available in various dimensions. Standard Inner-Seal in many colors . . . heavy-duty "dumb-bell" type in black . . . special types can be made to order.

Although Inner-Seal is most widely known in the refrigeration, railway, shipping and automotive fields, it's continually finding many new applications. Maybe *you* have one . . . maybe we can help!

FREE SAMPLES and complete information. *Write today.*

Bridgeport INNER-SEAL Live Rubber WEATHER STRIPPING

BRIDGEPORT FABRICS, INC., BRIDGEPORT 1, CONN.

For more details circle NED-53 on enclosed inquiry slip

cut costs · clean efficiently

cold steam

widely used in these industries:
Air Craft
Automotive
Bakeries
Breweries
Cement
Ceramics
Cheese
Construction

✓ *no back splash*
✓ *blasts stubborn dirt*
✓ *harmless to finest finish*

Distilling
Electrical
Food Processing
Foundries
Jewelry
Leather
Meat Packing
Machine Shops
Marine
Mining Equipment
Oil & Refinery
Optical
Paper
Pharmaceutical
Public Utilities
Repair Services
Railroad
Rubber

HYDRO·AIR PRESSURE WASHER $9.95

Connects to regular air and hot or cold water supply. Precise control of air and water blasts heavy dirt and grease or rinses sheets and small parts with a penetrating spray.

D & M Products, Inc., 26 N. Raymond Ave., Pasadena 1, Calif.

Order through your supplier or direct. The Hydro-Air washer will be sent post paid.

Ship Building
Stone Polishing
Textile
Tobacco
Transportation

For more details circle NED-56 on enclosed inquiry slip

HOW TO SATISFY A CUSTOMER

Package your products in Lermer Plastic durable, handsome containers. They are shatterproof, 75% lighter than glass, available clear or opaque in many colors, can be printed or decorated and are available with metal or plastic closures. Write for complete catalog information and samples. If possible, send along products for particular suggestions.

LERMER PLASTICS, INC.
Pioneers and Pacesetters in Plastic Packaging
514 South Ave., Garwood, New Jersey

For more details circle **NED-57** on enclosed inquiry slip

Do you use them?
Could you use them?

STAINLESS STEEL CYLINDERS

- Diameters from 1½" to 24"
- Exact lengths to suit
- Polished or unpolished
- Perfect edges
- Plain or perforated
- Economical quantity production

Ideal wherever sanitation or corrosion-resistance are needed. Fabricated to close tolerances, with or without invisible welds. Prices comparable to tubing.

Tell us your needs for recommendation and quotation.

METALSMITHS
Div. of Orange Roller Bearing Co., Inc.
572 White St., Orange, N. J.

For more details circle **NED-58** on enclosed inquiry slip

WITH RITE-HITE ADJUSTABLE LOADING DOCKS

- One man operation — set vertical and lateral dock adjustment in seconds.
- Fingertip Control — the RITE-HITE is perfectly counterbalanced.
- Proper dock to truck alignment speeds loading and unloading.
- Prevents damaging material.
- Rugged Design — All welded I-Beam construction.
- Easy to install in your present dock.
- No costly machinery, no electric or fluid controls.

GET ALL THE FACTS. Write for Bulletin B

LOOMIS MACHINE CO.
RITE-HITE DIVISION CLARE, MICHIGAN

For more details circle **NED-59** on enclosed inquiry slip

RETAINER SPRINGS
fit 3/32 to 15/16-in. shaft grooves

Of hairpin type, series of precision standard retainer springs serves same function as cotters and locking devices. Retention is obtained by snapping spring into groove in shaft. Fifteen different sizes fit shaft groove diameters from 3/32 to 15/16-in. Made of spring steel wire, they withstand repeated assembly and disassembly. Made by **Precision Spring Corp.**, 800 W. Broadway at Alfred St., Three Rivers, Mich.

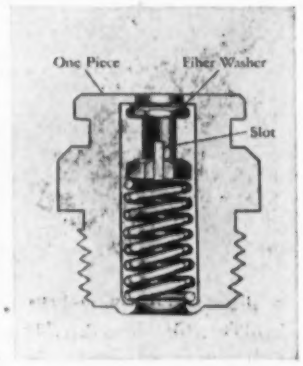
For more details circle **NED-60** on enclosed inquiry slip

HEAT TREATING FURNACE
capable of heating to 2000° F

Built with heating chamber dimensions of 10 x 6 x 18 in., VK-7 bench type heat treating furnace has heating elements of 6.5 kw capacity at 220 v single phase. Embedded elements in all four sides and in the door, can be easily renewed without dismantling the furnace. Unit is supplied with a fully wired and integrally-mounted control panel carrying a controlling pyrometer, fused line switch and instrument fuses. Made by **Cooley Electric Mfg. Corp.**, Dept. F-3, 905 Daly St., Indianapolis 2, Ind.

For more details circle **NED-61** on enclosed inquiry slip

GIANT GREASE FITTING
size provides maximum grease flow



Developed for use on all heavy industrial machinery, the universal giant buttonhead grease fitting provides maximum grease flow. One-piece construction is leakproof, strong, long-wearing and withstands abuse. A strong steel inner spring combines with a fiber sealing washer to prevent grease leakback. Fittings are offered in all standard sizes. Made by **Universal Lubricating Systems, Inc.**, 789 Allegheny Ave., Oakmont, Pa.

For more details circle **NED-62** on enclosed inquiry slip

ECONOMICAL

STAMPED PARTS IN SMALL QUANTITIES

Yes, it *is* possible—but it's a special skill of ours.

It's done with a new price-slashing method of making dies, used in conjunction with special machinery. In other cases we use custom equipment for die-less duplication by our own Machine-Cut Method.

FOR EXPERIMENTAL OR PRODUCTION REQUIREMENTS at rock-bottom prices, send us your blueprints. And make sure you get our latest, fact-packed literature.

STAMPINGS DIVISION
"ONE PIECE OR ONE MILLION"

LAMINATED SHIM COMPANY, INC.

2309 UNION STREET • GLENBROOK, CONNECTICUT

For more details circle **NED-63** on enclosed inquiry slip

Deep in the Jungles "way back when"— Apes made the FIRST "Rivetless Chain"

Apes have long been known to form "rivetless" chains. By the simple coupling process of linking tails they swing themselves out to cross streams and gorges.

Drop-Forged Rivetless Chain
another FIRST by
JERVIS B. WEBB COMPANY

Proved by years of dependable service is the Drop-Forged Rivetless Chain, first developed by Jervis B. Webb Company for Trolley Conveyors. Simple and strong, it is cheaper and lighter per unit of ultimate strength than any other type of conveyor chain. It can be installed or removed by unskilled labor. Having no rivets, welds or bolts, it requires no special or joining links and may be disconnected at any point, yet it is so designed that it cannot become disconnected while in service.

The No. X458 Chain (illustrated below) is completely interchangeable with the Webb FIRST—the original No. 458 Chain designed in the early Twenties by Mr. Jervis B. Webb. X458 Chain has the improved webbed side link which substantially stiffens it, preventing telescoping.

Need Conveyor Chain?
We're In Position To Make
IMMEDIATE DELIVERY
X458 Drop-Forged Rivetless Conveyor Chain
NOW

Improved production and material conditions have enabled Jervis B. Webb Company to stock an adequate supply of X458 Chain—ready for immediate delivery—to meet your conveyor system needs.

CONVEYOR ENGINEERS AND MANUFACTURERS
JERVIS B. WEBB COMPANY
8921 ALPINE AVE. DETROIT 4, MICH.
OFFICES IN PRINCIPAL CITIES
FACTORIES IN DETROIT . . . LOS ANGELES . . . HAMILTON, ONT.

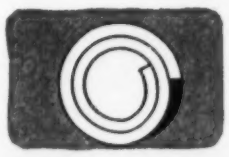
For more details circle **NED-64** on enclosed inquiry slip

SPIROL PIN

U.S. and Foreign Patents Pending

SPRING COILS ELIMINATE PRECISION FITTING

A new fastening principle — spirally wound flexible coils — make a pin with unique qualities. SPIROL PIN opens the way to design improvements and cost savings by eliminating all precision drilling and reaming.



Note how spiral coils compress to fit snugly

Standard sizes of Spirol pins available from stock.

The flexible spiral coils compress to fit shape of hole, locking pin in place, yet pin can be removed without damage and be re-used.

Thickness, tension, and number of coils can be varied to provide a wide range of shear, shock and vibration absorption properties. SPIROL pins are available for light, medium, or heavy duty applications. Consult our factory engineers.

FREE! Write for sample pins and illustrated SPIROL folder.

C. E. M. COMPANY • DANIELSON, CONN.
Telephone: Danielson 4-2411

For more details circle **NED-65** on enclosed inquiry slip

For more details circle NED-66 on enclosed inquiry slip

Clean And Rustproof In One Operation With IMMUNOL And Your Tap Water

It is an amazing fact that a small quantity of liquid IMMUNOL added to any water makes that water rustproof, a powerful wetting agent and a potent cleaning solution—all if need be, in one operation. No special preparations or equipment are necessary, and being neutral, odorless, non-toxic and non-inflammable there is no handling problem either before, after or during use. Parts may be dipped, sprayed or wiped whichever is most convenient, and after treatment will retain a non-oily, non-tacky, invisible film of rust protection designed for indoor uses. This film may be removed at any time with plain water or may be painted or lacquered over without removal.

There are countless varied uses for IMMUNOL:

- Removal of dirt, light oils, lint, etc. from metals, glass, plastics, ceramics, woodwork, walls, painted surfaces, etc.
- Rust protection of ferrous metals (For cast iron use IMMUNOL #1315)
- Prevention of water stains after rinsing in plating.
- For rust protection and preserving bright finishes after tumbling.
- Additional rust protection for soluble oil emulsions.

Send for descriptive booklet.

Haas MILLER Corp.
4th & BRISTOL STS. • PHILA. 40, PA.

For more details circle NED-67 on enclosed inquiry slip

NEW SURFACE FOR OLD FLOORS

"Pre-packaged" flooring makes old surfaces like new

Renew "beat-up" floors and traffic lanes with job-tested Plastic Rock. Bonds to concrete, wood or steel; perfect feather edge; spark-proof, skid-safe wet or dry; dustless, noiseless, easily cleaned; will not splinter, crumble, curl or loosen. Hundreds of tons rolling on steel wheels only pack denser; 10-year-old floors show no wear. Plastic Rock comes complete, packed in handy barrels; materials uniform in quality; no "formulae" or guesswork; simply mix and trowel (average thickness 1/2"). Maintenance crew or contractor can easily apply in 48 hours—over the week-end. Used everywhere by industry, railroads and institutions.

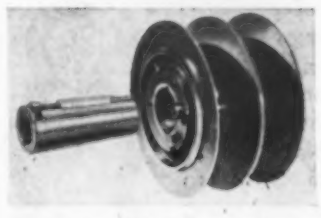
Plastic Rock puts shock-absorbers on your floors.

Get free bulletin "N-9"

UNITED LABORATORIES, INC.
16804 EUCLID AVENUE • CLEVELAND 12, OHIO

For more details circle NED-68 on enclosed inquiry slip

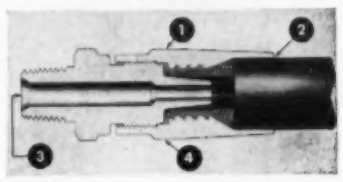
SHEAVE BUSHING
eases sheave installation, removal



Installation or removal of a Vari-Pitch sheave is easy with this Magic-Grip bushing which also allows sheave to be mounted on shaft so that adjusting control mechanism is either toward, or away from motor bearing. Bushing consists of two split-tapered sleeves, one within the other. When drawn together, bushing sleeve is contracted on shaft and outer sheave sleeve is expanded against disks simultaneously to lock entire mechanism with all working clearances eliminated. Torque is transmitted by keys. Made by **Allis-Chalmers Mfg. Co.**, 918 S. 70th St., Milwaukee 1, Wis.

For more details circle NED-69 on enclosed inquiry slip

FLEXIBLE HOSE COUPLINGS
reusable over and over again



Zinc-plated steel Lok-Tite couplings for flexible hose lines are designed to be used over and over again. Features as illustrated are (1) positive gripping when core of hose is inserted in sleeve. Wire braid is flared and gripped between shoulder of stud and shelf of sleeve with tremendous clamping force. Bell-shaped counterbore of sleeve (2) facilitates starting hose into coupling. It has extra large flow passage in stud (3). End of core (4) is completely confined by metal to eliminate hose extrusion and afford leak-proof performance. Made by **Lincoln Engineering Co.**, 5782 Natural Bridge Ave., St. Louis 20, Mo.

For more details circle NED-70 on enclosed inquiry slip

NIPPLE CHUCK
can thread 1/8 to 2-in. pipe

A polished steel body sliding plunger retained in working position by inserted pin and hardened steel threaded shank are components of the Beaver 55 Universal nipple chuck which can thread 1/8 to 2-in. pipe. Nipples are easily removed by hand. Chuck can be used with a pipe machine, power drive, any pipe vise or a machinist's vise. Heavy gage sheet metal carrying kit and full range of adapters, which allow for all sizes from 1/8 to 1½-in. pipe, are optional. No adapter is needed for 2-in. pipe. Made by **Beaver Pipe Tools, Inc.**, 310 Dana St. N. E., Warren, O.

For more details circle NED-71 on enclosed inquiry slip

Lower the Boom
....or raise it!

BUSCHMAN TROJAN
with one man
"finger" control

"Safety balanced" boom makes this possible. Yes, and one man can quickly move the TROJAN on the easy-rolling, anti-friction-bearing wheels. Use this all-purpose powered conveyor for loading, unloading, stacking or boosting. Operates in both directions and it performs faithfully under all conditions, year in and year out.

Representatives in Principal Cities
Canadian Licensee: James A. McKechnie, Ltd.
Toronto 12, Canada

Ask for Bulletin 50-A

The E. W. BUSCHMAN Co.
Spring Grove at Winton Place
CINCINNATI 32, OHIO

PRODUCE MORE ... FOR LESS
on Buschman Conveyors

For more details circle NED-72 on enclosed inquiry slip

S-A WINCHES SAVE TIME and MANPOWER

There are many lifting and pulling jobs around a plant which can be handled quickly, safely and more economically by an S-A hand-powered or motorized winch. A variety of S-A winches are available, enabling one man to lift loads up to 3000 pounds.

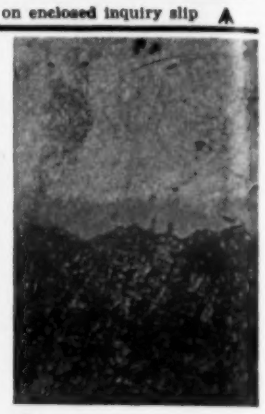
Write for Bulletin No. 340 for complete details.

Both Hand and Motor types for all kinds of hoisting jobs.

STEPHEN S-ADAMSON MFG. CO.
Tellevel-Bin Level Controls · Car Loaders · Car Pullers · Winches · Saco Speed Reducers · SealMaster Ball Bearings
12 RIDGEWAY AVE., AURORA, ILLINOIS

For more details circle NED-73 on enclosed inquiry slip

How to bond steel's brawn to aluminum's lightness



Alumibond: unique casting of aluminum to ferrous metals

An amazing new process—ALUMIBOND—enables you to combine the best qualities of aluminum and ferrous metals. If you have problems involving heat transfer, joining, weight saving, oxidation resistance, bearing surfaces—Alumibond can do an unusually successful job for you providing bond strength of 18,000 psi at interface junctions. Leading engineers now employ Alumibond to aid resistance to corrosion, for greater conductivity or heat dissipation, for more free machinability. In hundreds of similar applications, Alumibond can solve your design and production problems.

Write today for new Alumibond booklet

ARTHUR TICKLE ENGINEERING WORKS
20 Delevan St., Brooklyn 31, N.Y. MAin 5-4200

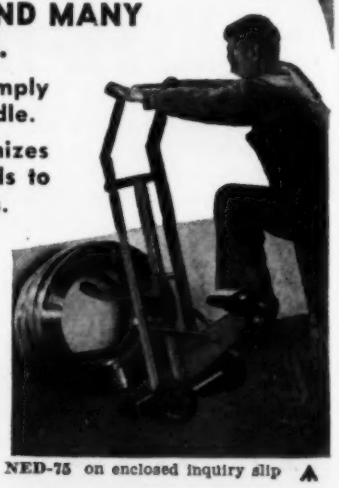
For more details circle NED-74 on enclosed inquiry slip

SABIN Coil TRUCK
REDUCES HANDLING TIME AND LABOR

ADJUSTABLE LIFTING ARM ENTERS HOLE IN COILS, WHEELS, TIRES AND MANY OTHER ARTICLES.

To pick up load, you simply pull back on truck handle.

Follower wheel minimizes trucking effort and adds to safety in moving loads.



The Sabin Machine Co.
6536 Carnegie Ave.
CLEVELAND 3, OHIO
Write for Bulletin

Manufacturers of Many Types of One-man Hand Trucks.

For more details circle NED-75 on enclosed inquiry slip

SWIVELOADER

Loads Bulk Materials Into Box Cars

(1) Faster (2) Easier
(3) At Low Cost

Powerful centrifugal thrower unit loads dry granular bulk materials up to 2" size into the far corners of box cars. One man operates loader without entering car. . . eliminates hand trimming. Handles 40 to 80 TPH depending on weight and nature of material.

Left—Car diagram shows how SWIVELOADER loads material into ALL parts of car from doorway.

Write for BULLETIN No. 1046

STEPHENS-ADAMSON MFG. CO.

Tellevel—Bin Level Controls · Car Loaders · SealMaster Ball Bearings · Car Pullers · Winches · Variable Speed Reducers · Saco Speed Reducers

12 RIDGEWAY AVE., AURORA, ILL.

▲ For more details circle NED-76 on enclosed inquiry slip ▲

---

a $ure $hot for $avings

14 REASONS WHY PRECISION FINISHING COSTS LESS WITH THE NEW LIQUAMATTE

Mechanical equipment for producing close tolerance finishes has finally been perfected. "Hand" finishes are now produced mechanically in a matter of seconds in the new Liquamatte without the operating difficulties usually encountered in these processes. A simplified method of wet blasting, the new Liquamatte has 14 advanced design features that lower finishing costs.

Typical heat treated forging die, one half of which has been cleaned with the Liquamatte using a fine mesh Liquabrasive.

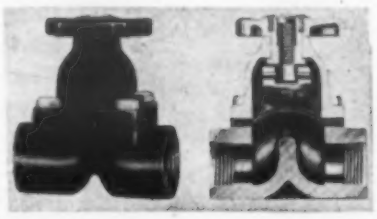
The Liquamatte is easier to start and more convenient to operate. Work can be handled faster with less effort and with far less down time. As a result, the Liquamatte uniformly removes scale and grinding lines at a new low cost. It cleans tools, dies and molds with greater efficiency while holding tolerances of .0001".

THE 14 WAYS the Liquamatte simplifies wet blasting are described in Bulletin 23. *Send for your copy today.*

American LIQUAMATTE WET BLASTING
WHEELABRATOR & EQUIPMENT CORP.
508 S. Byrkit St., Mishawaka 8, Ind.

▲ For more details circle NED-77 on enclosed inquiry slip ▲

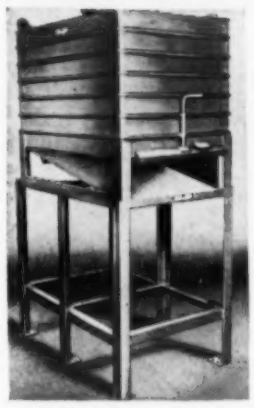
PLASTIC DIAPHRAGM VALVES
adaptable for corrosion service



Tough, odorless, nontoxic and corrosion resistant Parian plastic valves employ the Saunders diaphragm principle. Metal never contacts liquids. Valves are adaptable for handling wide variety of corrosive chemicals as well as foods. Diaphragm can be rubber, Neoprene or polyethylene, as required. Standard sizes range from ½ to 2 in., threaded for standard pipe. Working pressure is 50 psi at 77° F. Made by **American Hard Rubber Co.**, Dept. NED, 93 Worth St., New York 13, N. Y.

▲ For more details circle NED-78 on enclosed inquiry slip ▲

DROP-BOTTOM PARTS BOX
speeds handling, machining or storage



Efficient production in machining or processing of small parts is possible with this drop-bottom box. Parts are delivered at waist-high level when box is placed in stand by lift truck or crane. Hinged bottom locks securely closed during handling or storage operations, and turn of handle releases bottom so that parts flow into convenient position. Locking corners permit stacking of boxes to conserve space. Made by **Karl A. Herman Co.**, 333a W. Fulton St., Grand Rapids, Mich.

▲ For more details circle NED-79 on enclosed inquiry slip ▲

HEAVY DUTY LOAD CARRIERS
capacities range up to 36,000 lb

Designed to handle large, bulky industrial loads, extra-heavy-duty electric carriers are made with capacities up to 36,000 lb. Loads are placed and removed with power fork trucks or cranes. Four-wheel steering affords ease of operation and maneuverability. Truck moves in either direction, and operator can turn around for improved visibility. Made by **Yale & Towne Mfg. Co.**, Philadelphia Div., Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

▲ For more details circle NED-80 on enclosed inquiry slip ▲

QUICK, EASY WAY TO STOP LEAKS

Dry Up DAMP, CLAMMY BASEMENTS!

Leaks in concrete walls, masonry, cinder block, etc., can be stopped quickly with FLEXTITE. Actually seals against water pressure. Efficient as a trowel coat for sealing off water and dampness. Transforms leaky basement walls into dry surfaces. Used in elevator pits, tunnels, dams, tanks, retaining walls, etc. (Minimum quan. 6 gal.)

MAIL COUPON for TRIAL OFFER

FLEXTITE

FLEXROCK COMPANY
3603-F Filbert St., Philadelphia 4, Pa.
Offices in Principal Cities
Please send me complete FLEXTITE information and details of TRIAL ORDER PLAN—no obligation.
Name ..... Title .....
Company .....
Address .....

▲ For more details circle NED-81 on enclosed inquiry slip ▲

EMERGENCY HEAT ON WHEELS FOR INDUSTRY!

● You can avoid layoffs, speed work in cold areas, provide temporary heat for warehouses with Herman Nelson Portable Heaters. They also provide auxiliary heating for those extra cold days or during loading or unloading operations and for scores of other heating and drying jobs.

HERMAN NELSON DELUXE I
Capacity 280,000-450,000 BTU/hr. Completely automatic, including temperature control. Fresh air delivery 2,000-2,350 cfm. Oil fired, electric powered. Other models available—with gasoline or electric power—and capacities from 125,000 to 385,000 BTU/hr.

The only completely safe portable heater that uses flexible ducts to spot heat where most needed—and remember, only uncontaminated air heaters are absolutely safe!

Models as low as $360.00—total cost often saved during first season. For full information, write Dept 111, Herman Nelson Division, American Air Filter Company, Inc., Moline, Illinois.

▲ For more details circle NED-82 on enclosed inquiry slip ▲

How Avon saves $12,000 a year with International Carton Stapler

In 1950, the Chicago branch of Avon Products Inc., nationally known manufacturers of cosmetics and toiletries, installed an International Stapler for closing filled cartons of their products.

Formerly, it took 32 man-hours to close between 1,500 and 2,000 cartons of varying sizes. With the International Stapler, this operation requires approximately one-fourth the time.

International Staplers will save you up to 50% on shipping costs . . . write for details. ***Have you seen the new movie, "Package for Profit"? Ask about bookings.***

INTERNATIONAL STAPLING MACHINES
INTERNATIONAL STAPLE & MACHINE COMPANY
800 East Herrin Street, Herrin, Illinois

▲ For more details circle NED-83 on enclosed inquiry slip ▲

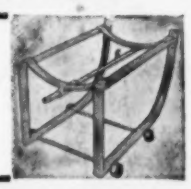
FAST... LEAK PROOF... PREVENTS EVAPORATION

Simple, compact, complete . . . without cylinder, piston rings or leather packing. Nylon diaphragm assures long service. Positive shut-off eliminates evaporation. Fast acting. Sturdy construction.

GS No. 750 Pump, complete **$13.45**

Low Cost Trouble Free Diaphragm Pump for Volatile Liquids

Barrel and Drum CRADLE
For storing and draining. ALL steel, strong but light weight. Exclusive loading bar makes easy loading possible. Complete with wheels, only $19.50

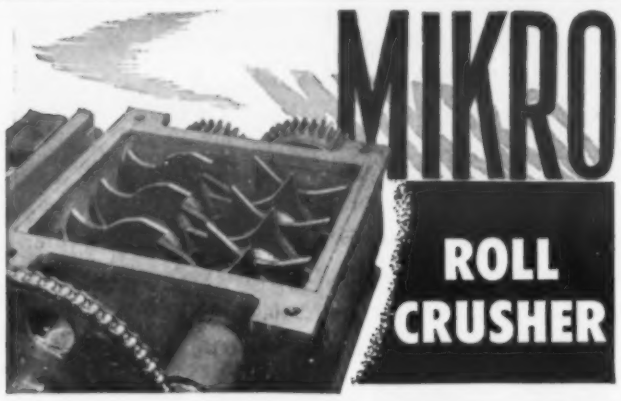


ORDER TODAY DIRECT. SHIPPED PROMPTLY FROM PHILA.

GENERAL SCIENTIFIC EQUIPMENT CO.
2701 W. HUNTINGDON ST., PHILADELPHIA 32, PA.

SAFETY EQUIPMENT FOR EVERY HAZARD

▲ For more details circle NED-84 on enclosed inquiry slip ▲



... for pre-crushing tough, resistant materials

Can be used as a pre-crusher with a MIKRO-PULVERIZER or as an independent crusher. Consists of a combination of star and hook type crushing units, ideal for use with soft, semi-hard, or tough materials.

Friction overload clutch with manual reset adequately protects machine. Gear reduction built in as integral part of unit. Uses standard motor—no special gear reducer or motor required.

SEND FOR new bulletin

PULVERIZING MACHINERY COMPANY
28 Chatham Road Summit, New Jersey

1014 PRESERVE OUR HERITAGE FAITH, FREEDOM AND INCENTIVE
MIKRO-PULVERIZER (FINE) -ATOMIZER (ULTRA FINE) REG. U.S. PAT. OFF.
Also Makers of the MIKRO-COLLECTOR

For more details circle NED-85 on enclosed inquiry slip

YOU'RE PAYING $100,000,000 FOR DERMATITIS

Amazed? That's the annual cost to industry. $100,000,000. Compensation and medical care for the average case is $200. Plus, further hidden costs — absenteeism, replacement training, sacrificed quality, lowered morale, lost production. All, needless expense. *Because dermatitis can be controlled!*

How? With West's simple, inexpensive prevention and control program that (1) makes sure of personal cleanliness (2) protects exposed skin areas (3) prevents clothing contamination (4) guards against special hazards.

The WEST Dermatitis Control Program is based on an in-*your*-plant survey — made without obligation or inconvenience to you. A West representative will be glad to give you details.

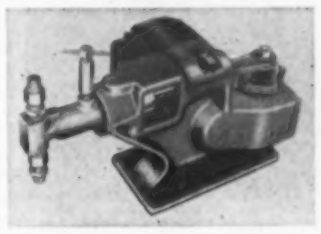
***FREE BOOKLET!** Write for your copy of West's new Dermatitis Control Booklet.*

WEST DISINFECTING Company

Dept. 16 A
4216 WEST STREET, LONG ISLAND CITY 1, N. Y.

For more details circle NED-86 on enclosed inquiry slip

CHEMICAL METERING PUMP
capacity range is 1 to 10 gph



Compact, self-contained model X-52 Adjust-O-Feeder chemical metering pump has adjustable capacity range from 1 to 10 gph, discharging against pressures up to 650 psi. Feeding range of 0.5 to 5 gph at same discharge pressure is also available. Unit has built-in oil-enclosed reduction gear and standard motor. Crank and connecting rod operate in horizontal plane for easy reading of micro-stroke adjustment scale. Made by **Proportioneers, Inc.**, 425 Harris Ave., Providence 1, R. I.

For more details circle NED-87 on enclosed inquiry slip

VACUUM CLEANER
picks up dust and liquids

Anything that will pass through its hose, including water and other liquids, can be picked up by this Alaco vacuum cleaner which has minimum water lift of 55 in. Extra lengths of hose up to 100 ft can be used without noticeable loss of suction. Unit is powered by 1-hp continuous-duty universal 110-220-v motor. Tank has 10-gal dust capacity, can be easily emptied and has corrosion-resistant inside. It has 15¾-in. diameter and stands 30 in. high mounted on hard rubber swivel casters. Enclosed dustproof filter cannot be injured by moisture, metal, heat or anything passing through hose. Cord is 35 ft long. Made by **Ace Co.**, 118 W. Washington St., Ocala, Fla.

For more details circle NED-88 on enclosed inquiry slip

METAL CUTOFF MACHINE
for heavy, continuous production

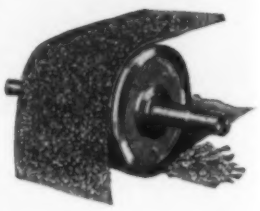
Power has been increased from 5 to 7½ hp in cutting head of the M75 cutoff machine used for heavy, continuous production cutting of all ferrous and nonferrous metals. Machines have proven efficient even on 16 hour a day production schedule. Work stop and air-activated vise are available at extra cost. Machine uses abrasive cut-off wheel. Made by **Stone Machinery Co.**, 624 Fayette St., Manlius, N. Y.

For more details circle NED-89 on enclosed inquiry slip

GUARANTEED!

HOMER permanent "non-electric" magnetic pulleys are guaranteed to equal or exceed the performance of electro magnetic pulleys

With HOMER non-electric Permanent Magnetic Pulleys, you eliminate Power Failures; Burn-Outs; Atmospheric and Temperature restrictions; Wet or Dry locations, because HOMERS are not affected by these natural elements. Homers are available for light, standard or heavy-duty service. Write today for bulletins describing this line of GUARANTEED HOMER MAGNETIC PULLEYS.

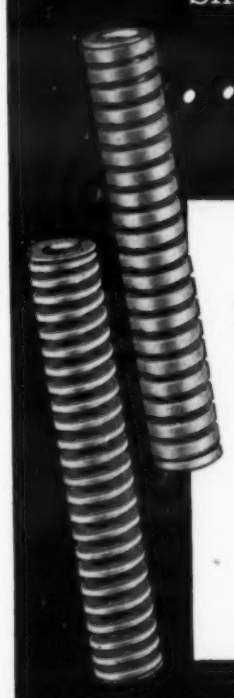


Homer **The HOMER MANUFACTURING CO., Inc.**
DEPT. I-25 LIMA, OHIO

Producers of Magnetic Separator Equipment Since 1923

For more details circle NED-91 on enclosed inquiry slip

Simplify Die Design
...Specify
DANLY®
DIE SPRINGS



Two complete size ranges . . designed for medium pressure —high deflection or high pressure—medium deflection . . . meet specific die making needs more exactly! Write today for complete information. Ask for the Danly Die Spring Folder.

SEND FOR YOUR COPY TODAY

DANLY MACHINE SPECIALTIES, INC.
2100 South Laramie Avenue, Chicago 50, Illinois
PRECISION DIE SETS...TOOL, DIE AND GAGE MAKERS SUPPLIES

For more details circle NED-92 on enclosed inquiry slip

*Well-Cast

COMMERCIAL LIGHTWEIGHT CASTINGS

Your commercial requirements for lightweight castings in aluminum or magnesium may be tough, but we'd welcome an opportunity to look them over.

*Well-Cast

MILITARY LIGHTWEIGHT CASTINGS

Aircraft wheels, strut parts, engine parts and miscellaneous components are being made every day at our plants, in aluminum and magnesium.
Sand, semi-permanent and permanent mold form.

Well-Made Wood and Metal Patterns.
Well-Cast Ampco Bronze Castings.

*Copyrighted Trade Name.

If you would like to receive the Wellman Magazine each month without charge, drop us a note on your business letterhead.

THE WELLMAN BRONZE & ALUMINUM CO.
DEPT. 15, 12800 SHAKER BLVD., CLEVELAND 20, OHIO

For more details circle NED-90 on enclosed inquiry slip

American Manufacturers Specify "Weld-Bilt" Trucks for Overseas Plants

Leading American manufacturers have learned that, in remote plants, where parts and service are hard to come by, Weld-Bilt Trucks stand up and deliver.

You can SEE the greater strength and durability in Weld-Bilt Equipment . . . in heavier arc-welded construction, in sturdier operating parts, in many innovations that assure easier, friction-free operation. Write today for catalog and details on the complete Weld-Bilt Line.

WEST BEND EQUIPMENT CORPORATION
MATERIALS HANDLING ENGINEERS
311 WATER ST. • WEST BEND, WIS.

For more details circle NED-93 on enclosed inquiry slip

NOW — Wide Range Vari-Pitch Sheave has 3 New Advantages!

1 *Magic-Grip Mounting*—Only one screw makes or breaks vise-like grip of sheave bushing on motor shaft. Fast, easy mounting.

2 Fast adjustment — Simply turn single adjusting screw, using lever rod. No fumbling with screwdrivers.

3 Adjusts from either side — Mount sheave so adjusting screw is either toward or away from motor bearing, whichever way it is more accessible.

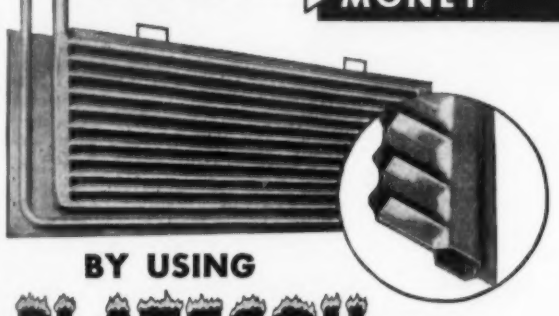
Get complete facts in data sheet 20S7811. Ask your nearby Allis-Chalmers distributor, district office, or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-3840

Texrope, Vari-Pitch and Magic-Grip are Allis-Chalmers trademarks.

ALLIS-CHALMERS

▲ For more details circle NED-94 on enclosed inquiry slip ▲

YOU SAVE STEEL MANHOURS MONEY



BY USING PLATECOIL FOR TANK HEATING AND COOLING

YOU SAVE CRITICAL STEEL because "Platecoils" require less than ½ the steel used in pipe coils of the same surface area. A 22" x 119" Platecoil weighs 95 lbs. against 239 lbs. for an equivalent 2" pipe coil. 144 lbs. steel saved. YOU SAVE CRITICAL MANHOURS because "Platecoils" are easily installed, cleaned or replaced in minutes . . . No down-time . . . No tank dumping. Many manhours saved.
YOU SAVE MONEY because "Platecoils" cost up to 50% less in initial cost and require less maintenance. Investigate "Platecoils" today.

Send for complete technical manual and descriptive Bulletin No. P57

PLATECOIL Division KOLD-HOLD MFG. CO. LANSING 4, MICHIGAN

▲ For more details circle NED-95 on enclosed inquiry slip ▲

TAL PORTABLE BENDERS — Complete ALL Piping Jobs FASTER

AND Reduce
- Number of Fittings Needed
- Cutting, Threading and Welding
- Errors and Work Spoilage
- Overall Installation Cost

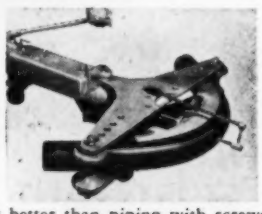
Where pipe and tubing must be installed for new plant equipment or maintenance jobs, you can *save fittings . . . save time* for cutting and threading or welding . . . with a Tal Portable Bender.

On-the-job bending is a real money-saver for installation of steam and water pipe, radiant heat tubing, electric conduit, compressed air or hydraulic lines, coolant pipe and similar work.

No experience is necessary to quickly produce smooth, wrinkle-free bends and offsets in just one setting—without shifting the pipe. Worker fatigue is reduced. The time of experienced men is saved for more complicated jobs.

GET SUPERIOR WORK

Smooth, streamlined pipe jobs made up by bending are equal to



or better than piping with screwed or welded fittings. Each joint eliminated will also eliminate a potential leak, and a point where foreign matter may collect. Unrestricted flow is assured—head loss is minimized.

Save money . . . get superior work. Learn how you can speed up plant piping jobs with a Tal Portable Bender.

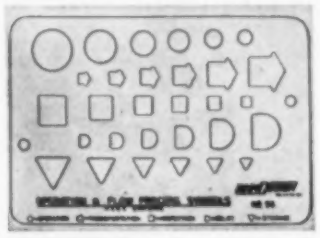
COMPLETE LINE OF BENDERS FOR:
1. Offsets and bends to 180°.
2. Pipe and rigid conduit to 8" dia.
3. Copper and thin wall tubing.

Write for this Free Bulletin

Tal Bender, Inc. Dept. 4 Milwaukee 2, Wis.

▲ For more details circle NED-96 on enclosed inquiry slip ▲

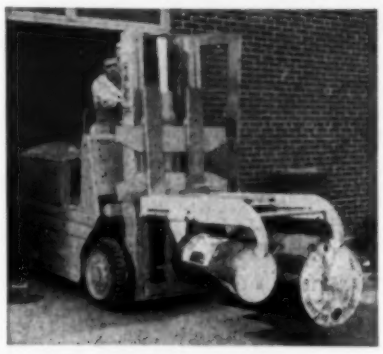
OPERATION & FLOW TEMPLATE simplifies planning and layout



Employing symbols standardized by ASA for use in process charts to depict the flow and handling of materials, No. 55 drafting template can be used also to show flow of paperwork in detailing office procedures. Each symbol has six sizes, and outlines are smooth. Template is made of mathematical quality matte-finish plastic, with printing on matte surface to minimize wear. Price is $1.50. Made by **Rapidesign, Inc.**, P. O. Box 592A, Glendale, Calif.

▲ For more details circle NED-97 on enclosed inquiry slip ▲

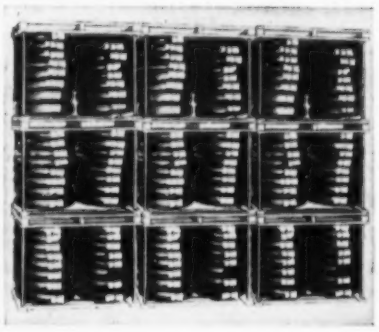
DRUM HANDLING ATTACHMENT clamps directly onto truck forks



Clamping directly onto forks of fork lift truck, this horizontal automatic drum-handling attachment is capable of carrying two different size drums at the same time. Operation is completely mechanical. Driver tilts mast backwards and engages rear hook on each boom of attachment with near end of each drum. By moving truck slowly forward and tilting mast forward, front hooks are engaged. Long tension springs keep rear hooks in contact with drums during this operation. Picking up load locks rear hooks for positive grip. To deposit load, procedure is reversed. Made by **Yale & Towne Mfg. Co.**, Philadelphia Div., Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

▲ For more details circle NED-98 on enclosed inquiry slip ▲

STACKING RACK PALLET assembled with used or reject pipe



Adaptable for handling and storage of products that require rack pallet rigidity, this pipe rack pallet is easy to stack, will not sway and is low cost. Top and base are purchased separately. Used or reject pipe can be purchased for assembling rack. Pallet is also usable for handling and shipping. Made by **National Pallet Corp.**, 535 Smithfield St., Pittsburgh 22, Pa.

▲ For more details circle NED-99 on enclosed inquiry slip ▲

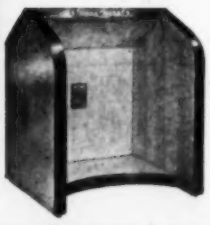
No Miracle, Just *Sound Engineering*

Model 210

Noise reduced 50%* inside a BURGESS-MANNING *Acousti-Booth*

In the hushed interior of this roomy, airy Acousti-Booth you hear easily while telephoning. Walls of thick sound-absorbing material and patented construction reduce the loudness of noise by 50%.

Pleasing in appearance . . . simple to install.



Model 601

Write for Bulletin A-107

* Results of studies by a prominent research group

BURGESS-MANNING COMPANY
Architectural Products Division
5970-C Northwest Highway, Chicago 31, Illinois

▲ For more details circle NED-100 on enclosed inquiry slip ▲

Chip Away... PAINT RUST SCALE

with AURAND CLEANING TOOLS

Clean off accumulations of scale, paint, rust or any foreign matter from any hard surface with Aurand Cleaning Tools. Toothed cutting wheels, loose pinioned on rotating head chip away accumulations at high speed. Positive depth shoe prevents cutting into permanent surface and assures uniform cleaning of entire area.
Two sizes in electric or pneumatic models.
For full details, write Dept. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

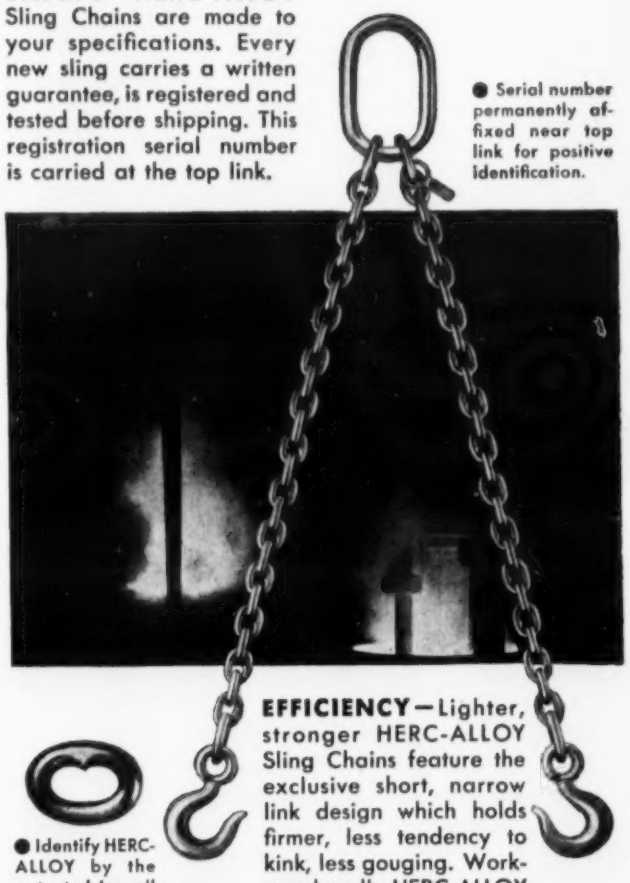
▲ For more details circle NED-101 on enclosed inquiry slip ▲

NONE BETTER...
America's First and Safest
HERC-ALLOY SLING CHAINS

STRENGTH—Size for size, no other sling chain offers a greater tensile strength. HERC-ALLOY will not crystallize—never requires annealing.

SAFETY—HERC-ALLOY Sling Chains are made to your specifications. Every new sling carries a written guarantee, is registered and tested before shipping. This registration serial number is carried at the top link.

● Serial number permanently affixed near top link for positive identification.



● Identify HERC-ALLOY by the patented Inswell side weld with the extra swell of metal on the inside of the link.

EFFICIENCY—Lighter, stronger HERC-ALLOY Sling Chains feature the exclusive short, narrow link design which holds firmer, less tendency to kink, less gouging. Workmen handle HERC-ALLOY with less effort.

PREFERENCE—Men who buy and use sling chains are influenced only by facts learned through experience. HERC-ALLOY Sling Chain preference has been built up over the years, not just by what we say, but by how HERC-ALLOY performs on the job.

Write for Data Book No. 3 which contains much useful manufacturing and application information on HERC-ALLOY Sling Chains.

COLUMBUS McKINNON CHAIN CORPORATION
(Affiliated with Chisholm-Moore Hoist Corp.)
GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
District Offices: New York • Chicago • Cleveland
Other Factories at Angola, N. Y., Dixon, Ill., St. Catharines, Ont., Can., and Johannesburg, South Africa.

▲ For more details circle NED-102 on enclosed inquiry slip ▲

INCREASE PRODUCTION...eliminate errors...prevent costly accidents ...*in your industrial operations.* Westline pressure-sensitive labels are easy to 'a-ply-dry'... and they stick-and-stay-stuck through heat, cold and humidity. Westline pressure-sensitive markers provide over 12 different solutions to your industrial identification

solved YOUR INDUSTRIAL IDENTIFICATION PROBLEMS!

WIRE
PIPES
FLOW LINES
PARTS-IN-PRODUCTION
INSPECTION
INSTRUCTION
QUICKLY IDENTIFIED
!

problems. They can be supplied from stock or to your exact specifications in size and marking information.
Get the facts on this amazing modern method of industrial marking today!

WESTLINE *Products*
Division of Western Lithograph Company
600 East Second Street, Los Angeles 54, California
Box 3804, St. Louis 22, Missouri
Write for Folder, Dept. NED-9

For more details circle NED-103 on enclosed inquiry slip

HOW TO SELECT THE *RIGHT* MOTOR AND CONTROL FOR YOUR JOB

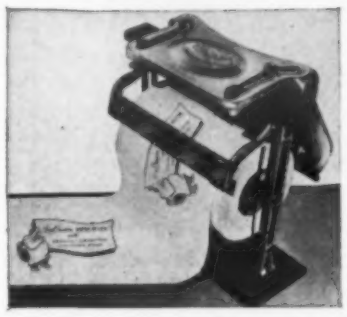
Name your motor and control need . . . a-c or d-c, from 1 to 700 hp . . . this book has the answers! Gives requirements to consider before selection. Features comprehensive chart, teaming the right motor and control to the right job.

Introduces Westinghouse motor and control features—tells what they mean to you . . . shows modifications and accessories available and explains how they add life and versatility. It's a valuable selection guide with a storehouse of facts. Write for free booklet, Motor and Control Selector Guide, B-5458, Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania.
J-21687

YOU CAN BE SURE... IF IT'S Westinghouse
MOTORS and CONTROLS

For more details circle NED-104 on enclosed inquiry slip

ROLL PAPER PRINTER
prints ads on wrapping as it is used



Promotional copy is printed on any type roll wrapping paper, plain or patterned, as it is used with this Pul-Ad printing device which mounts on any roll paper dispenser. Ads are printed with immediate drying, waterproof dye by means of rubber plate that can be changed quickly, filed away and replaced with new copy as often as desired. Made by **J. J. Connolly, Inc.**, 457 W. 40th St., New York 18, N. Y.

For more details circle NED-105 on enclosed inquiry slip

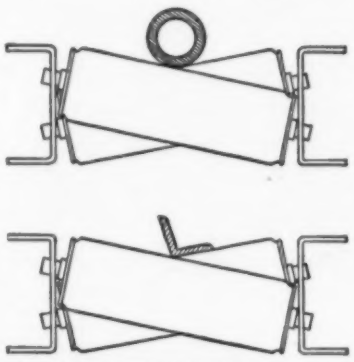
FLEXIBLE COUPLINGS
for speed reducer and motor shafts

Standard bore Cone-Drive flexible couplings are gear type and consist of a sleeve, two hubs, two neoprene seals and two snap rings. Easily disassembled and sealed against weather, couplings allow average of 3 degrees angular misalignment and 1/16-in. offset, depending on size. They are made in 22 bore diameters from ¾ to 6½ in. with capacities from 4 to 550 hp. Mill motor, spacer, vertical shaft and floating shaft types can also be had in ⅜ to 6⅝-in. bores. Made by **Michigan Tool Co.**, Cone-Drive Gears Div., 7204 E. McNichols Rd., Detroit 12, Mich.

For more details circle NED-106 on enclosed inquiry slip

SELF-CENTERING CONVEYOR
rollers tilted to form "trough"

Pipe, boards, bars, shapes, shells and other items can be conveyed forward without a side guard on the Vee-Conveyor. Material is automatically centered, as each roller is slightly tilted with alternate rollers tilted in opposite directions to form a "trough." Conveyors are made in various widths and roller load capacities to suit individual requirements. Made by **Alvey Conveyor Mfg. Co.**, 9259 Olive Street Rd., St. Louis 24, Mo.



For more details circle NED-107 on enclosed inquiry slip

GAST rotary air compressors ATOMIZE FUEL OIL UNIFORMLY for "Powermaster" Steam Generators

See our CATALOG in SWEET'S FILE

Gast Application Ideas Booklet — showing 26 design problems solved —sent upon request.

PROBLEM: Select a compressor to supply uniform, pulseless air volume for atomizing fuel oil in the combustion chamber of Orr & Sembower "Powermaster" Boilers.

SOLUTION: Three sizes of Gast Rotary Air Compressors proved excellent for boilers of 50, 100 and 150 H.P. Gast Rotary Vane Design delivers positive, pulseless pressure from 18 to 22 psi and displacements to 22 cfm — *without* a bulky pressure tank.

RESULT: Positive air volume *pulverizes every droplet of fuel oil.* Long, trouble-free performance results from ball-bearing compressors with automatic lubricator, intake filter, cooling fins and fans.

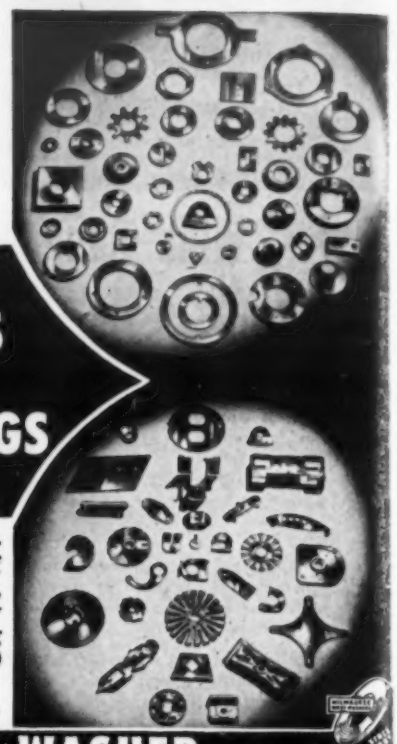
ONCE AGAIN you can see how Gast Rotaries — plus concentrated experience with air power, low vacuum and pressure — helped solve a specific problem. Have you considered the advantages of Gast Rotaries on your product? Write us, outlining your problem — you'll receive prompt cooperation. "Air may be your Answer!"

Original Equipment Manufacturers for Over 30 Years

GAST ROTARY — AIR MOTORS · COMPRESSORS · VACUUM PUMPS
(TO THREE H.P.) (TO 30 LBS.) (TO 28 INCHES)
GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

For more details circle NED-108 on enclosed inquiry slip

Serving **INDUSTRY**
SINCE **1887**



WASHERS and STAMPINGS

Standard and Special Washers, of every description, any material, any finish, utilizing more than 22,000 Sets of Dies.
Let us Quote on Your Needs.

WROUGHT WASHER MFG. CO.
THE WORLD'S LARGEST PRODUCER OF WASHERS
2256 SOUTH BAY STREET • MILWAUKEE 7, WISCONSIN

For more details circle NED-109 on enclosed inquiry slip

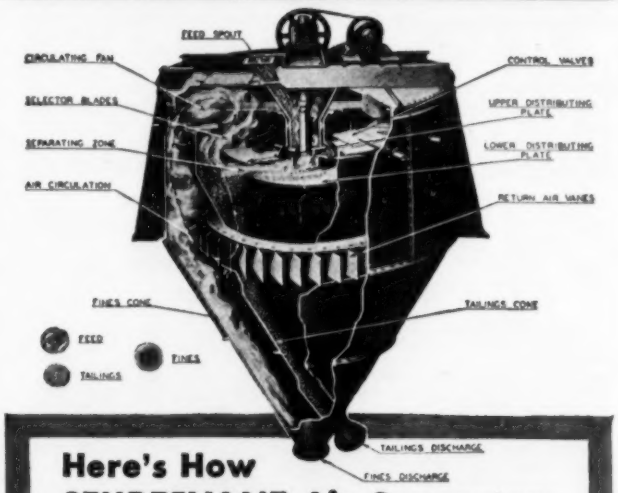
SAVE WEAR
on MACHINE TOOLS
. . . CUTTING TOOLS

Extract Iron and Steel Particles from Coolants and Lubricating Oils with the FRANTZ **FERRO FILTER**

A stack of grids is magnetized by a pair of powerful Alnico permanent magnets to remove chips and particles as fine as one micron. Cleans lubricating oil to protect all wearing surfaces . . . filters coolants and cutting oils to provide finer finishes, longer pump and tool life.
Send for BULLETIN 56

S. G. Frantz Co., Inc.
P. O. Box 1138 • Trenton 6, N. J.
Manufacturers of Permanent Magnet and Electromagnetic Separators

For more details circle NED-110 on enclosed inquiry slip



Here's How STURTEVANT Air Separators Increase Production of Fines ...Lower Production Costs

Sturtevant Air Separators effect production savings by increasing output by 25 to 300% . . . reducing power consumption by as much as 50%.
They efficiently carry off all classified materials in any desired fineness from 40 to 325 mesh and finer . . . eliminate the need of screening in certain applications. Capacities available from ¼ to 50 tons per hr. *Write for full details, today.*

Sturtevant Mill Company
114 Clayton Street, Boston 22, Mass.

For more details circle NED-111 on enclosed inquiry slip

high jobs go fast on the

safety level.....

Dayton's special "Safety Level" working platform gives workman complete confidence. He works faster, more efficiently, uses both hands. Check the "big 6" features that make Dayton your best buy.

1. Rail-guarded "Safety Level" platform.
2. Locks in place automatically.
3. Rubber safety shoes.
4. Light weight—great strength.
5. Economically priced.
6. Complete size range 3' to 16' in height.

Write Dept. E for Bulletin

Dayton safety ladders

Dayton safety ladder co.
2339 Gilbert Ave.
Cincinnati, Ohio
In Canada:
Safety Supply Co., Toronto

▲ For more details circle **NED-112** on enclosed inquiry slip ▲

Increased Time Savings in Finishing —On a Rubber Cushion!

For All Metals, Plastics, Wood, Glass, Hard Rubber, Pressed and Laminated Materials and Combinations

The RUBBER CUSHIONING in Brightboy Abrasives gives you combined

BURRING • FINISHING • CLEANING • POLISHING in one operation

You get the working advantages of *both* abrasive and rubber—at savings of up to 50% in finishing time. Brightboy's unique, gratifying surfacing action occurs as the rubber binder gently "cushions" the effect of the abrasive the moment machine or manual finishing begins. Surface, work quality, time savings, versatility, will be a revelation to you. You will find that Brightboy will do many things other abrasives can't. It will give you a refreshingly new, immensely wider concept of finishing.

HOW BRIGHTBOY SAVES PRODUCTION TIME:

Brightboy does countless jobs conventional abrasives cannot do —PLUS low-cost, "everyday" finishing. Bridges the gap between the rough grind and the buff. Works to close tolerances; can be shaped to contour. Produces a wide variety of conventional and special finishes and patterns; (damaskeening, for example); frequently the final polish. Requires no before-use preparation or dressing; no skilled labor to handle it.

A FEW OF MANY GENERAL USES:

Removing light digs, tool and heat marks • Cleaning welded and soldered joints • Finishing dies and molds • Burring stampings, castings, machined parts.

Ask your dealer for the Brightboy introductory sample card and the Brightboy Catalog Manual. Write us if he cannot supply you or if you have any problems in which finishing is involved.

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
6th Ave. & No. 13th Street
Newark 7, N. J.

WELDON ROBERTS **Brightboy** RUBBER CUSHIONED ABRASIVES

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"HELP ON WHEELS"!

LATEST DICO'S *Free* CATALOG EDITION

. . Sure, Speedy HELP On Your WHEEL PROBLEMS

The latest edition of the DICO Company's WHEEL CATALOG **HELPS** you by answering your high speed and low speed wheel engineering problems . . . with simplified information and specifications on your needs of dependable, highest quality DICO Wheels. Be Sure YOU Get This "HELP ON WHEELS"!

DICO COMPANY

Write **TODAY!**

A modern line of industrial wheels 6"—22" rubber diameter.

206 S.W. 16th ST., DES MOINES, IOWA

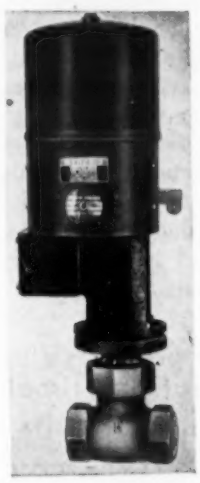
▲ For more details circle **NED-114** on enclosed inquiry slip ▲

VERSATILE DRAWING TOOL is free upon request

Here's a useful and handy device for drawing, layout and mechanical work. This Circ-L-Scale is a combination compass, scale, protractor and lettering guide. Made of durable and dimensionally stable Vinylite plastic, this pocket tool has temperature conversion table, decimal equivalents, tap and drill scale and metric rule on reverse side. It's free. Offered by **Unistrut Products Co.,** Dept. 75, 1013 W. Washington Blvd., Chicago 7, Ill.

▲ For more details circle **NED-115** on enclosed inquiry slip ▲

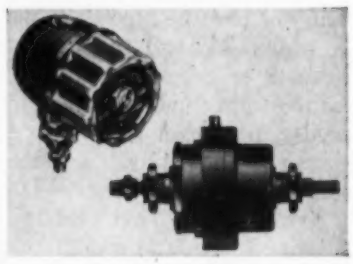
MOTORIZED VALVE for highly corrosive chemicals



Acid mine water, sulphuric acid, sulphurous acid and other such highly corrosive chemicals can be handled by two series of motorized valves. Series G2-64 is rated 275 psi at 250° F, and series G3-64 is adaptable to 600-psi 125° F service. Both are 1-in. valves with screwed connections. Of two-wire motor driven, current failure type, valves operate on hydraulic principle by means of oil pump, cylinder and controls. They are designed for on-off control of flow. Made by **Mercoid Corp.,** 4223 Belmont Ave., Chicago 41, Ill.

▲ For more details circle **NED-116** on enclosed inquiry slip ▲

HYDRAULIC POSITIONER is accurate for remote control



Hydraulic positioning of valves, throttles, engine speeds and brakes and other mechanical functions are possible with the Hydrotorque. This hydraulic positioning control affords extreme accuracy and power at remote locations. System will also indicate level, flow, static pressure, positions or temperature. It is single tube system that operates independent of outside energy. Transmitters and receivers can be supplied in wide variety of combinations and in many variations of mounting methods. Calibration of dials is to custom requirements, and they can read in practically any unit of measurement. Made by **Farris Hydrotorque Corp.,** 551 Commercial Ave., Palisades Park, N. J.

▲ For more details circle **NED-117** on enclosed inquiry slip ▲

METZGAR GRAVITY WHEEL & ROLLER CONVEYORS

GRAVITY POWER *Costs Nothing*

Saves up to 70% time in loading, unloading, warehouse handling and production line flow of work at no cost for power. Portable or permanent installation. Lubricated for life. Ball Bearing throughout.

Standard 11½"; 15"; 18" widths . . . 5'; 10' lengths. Curves 5'; 8'; 12', or to order. Strong ribbed rails.
Ask for Folder No. 1251

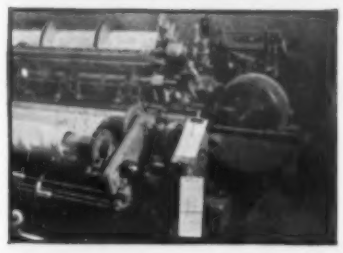
METZGAR CO. METZGAR CONVEYORS

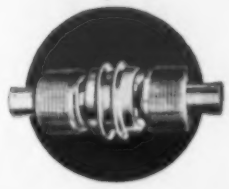
MFGRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES • REEL DOLLIES & END-WOOD WHEELS.

416 Douglas N.W.
GRAND RAPIDS 4, MICH.

▲ For more details circle **NED-118** on enclosed inquiry slip ▲

Rockford Clutches Help Control





High Speed Knitting Machines

REINER High Speed Tricot Machines must have delicately adjusted controls to assure the uniform high quality demanded by fabric mills. ROCKFORD CLUTCHES contribute to the easy operation, steady production and safety of REINER machines. Let ROCKFORD clutch engineers help solve your power transmission control problems.

B-W ENGINEERING MAKES IT WORK
B-W PRODUCTION MAKES IT AVAILABLE
ENGINEERING BULLETIN SENT ON REQUEST

ROCKFORD CLUTCH DIVISION BORG-WARNER
312 Catherine Street, Rockford, Illinois, U. S. A.

ROCKFORD CLUTCHES

▲ For more details circle **NED-119** on enclosed inquiry slip ▲

Famous Guns

Deringer Percussion Pistol Model 1843

Product of Henry Deringer of Philadelphia. Deringer's large caliber, short barreled pocket pistols were so popular that others imitated them—calling them "derringers". John Wilkes Booth used a Deringer to assassinate Lincoln.

Trap or Doorjamb Pistol Caliber .31

Made by North & Couch, Middletown, Conn. This lethal little device protected householders against burglars. Fixed to the doorjamb, with a cord running from muzzle rod to door, the pistol fired all its barrels into any intruder.

Weller Instant-heating Soldering Gun

for light or heavy work. Dual heat greatly increases tip life. Switch instantly to high or low heat as job requires. Pre-focused spotlights end "blind soldering". Exclusive tip-fastening arrangement assures full, constant heat. High-impact plastic housing. Perfect balance. Low-cost replaceable tips. Pays for itself in a few months. See at your Distributor or write for Bulletin direct.

Get SOLDERING TIPS, new Weller Handy Guide to faster, easier soldering. 20 pages fully illustrated. Price 10c at your Distributor or order direct.

Weller BETTER FROM GRIP TO TIP!

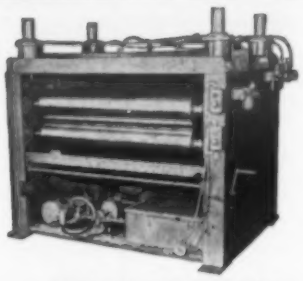
SOLDERING GUNS 809 Packer Street, Easton, Pa.

The Finest Soldering Tool for the Finest Craftsmen

▲ For more details circle **NED-120** on enclosed inquiry slip ▲

UNION AUTOMATIC COMPOUND SPREADERS

SAVE *8 WAYS



1 "Die life increased 75%."
2 "Production increased 20%."
3 "Compound saving of 16%."
4 "Rejects reduced 10%."
5 "One helper eliminated."
6 "Paid for itself in 54 days."
7 "Able to use salvage stock for some operations."
8 "25,000 more pieces before changing dies."

MODELS TO FIT ANY STOCK UP TO 96" WIDTH

Union is the foremost designer and manufacturer of roller coating machines for application of drawing or stamping compounds and protective coatings.

Models may be equipped with hardened steel, or with neoprene-covered rolls—also with heated or cooled rolls—to meet your individual requirements.

*The above claims are based on actual statements by users, both large and small—a number of whom have ordered a second and third machine.
Complete data and agent's name on request. Union will design and/or manufacture coating machines to meet your specific requirements.

UNION TOOL CORP.
314 E. MARKET ST., WARSAW, IND., U.S.A.

USERS SAY UNION CUTS COSTS, SPEEDS PRODUCTION

For more details circle NED-121 on enclosed inquiry slip

2 ELECTRIC PRODUCTIMETERS

"CS" and "Y" ELECTRIC PRODUCTIMETERS The answer to all electric counting requirements

Two Companion Counters . . . Two Sizes . . . Hi-Speed . . . Accurate . . . Long Life . . . Totally Enclosed

Speeds of 1000 counts per minute. Both counters give maximum readability. Design fits all mounting conditions . . . panel mounting or base mounting. Hardened steel working parts for long life and dependability.

New type case for compactness, rigidity, and protection against dust and moisture conditions. Operate accurately over wide current fluctuations.

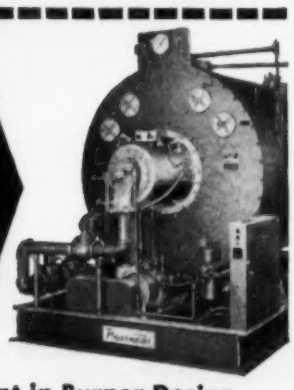
Write for "New Electrics" Bulletin

DURANT MANUFACTURING CO.
1922 N. Buffum St. Milwaukee 1, Wis.
122 Orange St. Providence 3, R. I.
Representatives in Principal Cities

PRODUCTIMETERS SINCE 1879 *Count Everything*

For more details circle NED-122 on enclosed inquiry slip

ONLY THE *Powermaster*® GIVES YOU *VORIFLOW*® COMBUSTION!



Latest Development in Burner Design Saves Fuel and Man-Hours

1. Wide range modulation between high and low fire at full efficiency—you use less fuel. 2. Freedom from carbon cuts clean-up time and expense—usually by 50%. 3. Change from oil to gas (or gas to oil) in a few minutes.

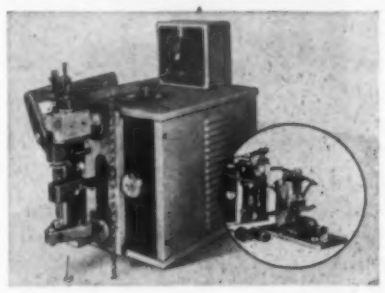
To Cut Your Steam Costs Mail Coupon Today

ORR & SEMBOWER, INC. • 930 Morgantown Road • Reading, Pa.
Please send my free copy of the POWERMASTER catalog.

NAME _____ TITLE _____
(Please Print)
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

For more details circle NED-123 on enclosed inquiry slip

WELDING & SOLDERING MACHINE also silver solders, soft solders and spot welds dissimilar metals

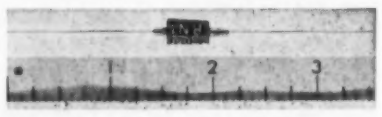


Equipped with timer, model 5000 WVS resistance spot welding and soldering machine which handles large and heavy parts also silver solders, soft solders and spot welds precious and dissimilar metals. Steel parts up to 3/16-in. thick, copper-to-copper parts up to 0.040-in. and brass-to-brass up to 0.080-in. thick can be spot welded, while brass up to ¼-in. thick can be soldered. Quick-adjusting device for pressure control and length of electrode travel is featured.

Available models include Nos. 1000 WV, 2000 WV and 5000 WV which operate on 110-v ac, 9 amp; 220-v ac, 10 amp; and 220-v ac, 25 amp, respectively. Latter two are equipped with water cooled electrodes. Electrodes especially designed for each job are spring-action controlled for holding work firmly. An automatic cutoff timer regulates soldering time, while heat control with 11 adjustments determines correct heat for job. Made by **Joyal Products, Inc.**, 56A Belmont Ave., Newark 3, N. J.

For more details circle NED-124 on enclosed inquiry slip

TAPERED GERMANIUM DIODES replace detector and rectifier tubes in radio, TV and electronic circuits



Tapered hexagon shaped body of these germanium diodes speeds assembly operations and visual inspection by showing polarity at a glance. Diodes are designed to replace many of present type detector and rectifier tubes used in radio, TV and other electronic equipment. Unit consists of germanium wafer soldered to nickel alloy cathode pin, and an electro-etched tungsten whisker welded to nickel alloy anode pin, assembled into a glass-phenolic body. Assembly is impregnated with polyethylene compound.

Available are JAN preferred types 1N69, a general purpose and V.H.F. rectifier unit; 1N70, a high voltage diode; and 1N81, a medium voltage diode with very low back leakage near 10 v. Commercial types are the 1N48 and 1N51 general purpose diodes, the 1N64 video second detector and 1N65 dc restorer. High performance, low back leakage commercial units include the 1N52, 1N63 and 1N75.

Diodes can be clip mounted by terminal pins, or soldered in by copper-tin clad iron pigtail leads welded into pins. Made by **Radio Receptor Co.**, 251-A W. Nineteenth St., New York 11, N. Y.

For more details circle NED-125 on enclosed inquiry slip

New THERMALINK Automatic Electric OIL PRE-HEATING UNITS

★ Integral adjustable thermostat eliminates wiring problems.
★ Adjustable temperature dial marked in degrees.
★ Available with both thermostat and motor control built into unit.
★ No relays or auxiliary controls needed.
★ Available with pipe-thread or flange header.
★ Wattages from 1000 through 7500.
★ Conservative watt-densities prolong life, minimize carbonization.

WRITE DEPT. N FOR DATA SHEETS PRS-152 & FRS-152

ELECTRO-THERM INC. • SILVER SPRING, MD.

For more details circle NED-126 on enclosed inquiry slip

Send For Your Free Copy

SLIPPING ACCIDENTS? Write for Booklet A-4

This Free 8-page Booklet Shows You How To End Them with **A.W. ALGRIP** ABRASIVE ROLLED STEEL FLOOR PLATE

- A.W. ALGRIP is the world's *only* Abrasive Rolled Steel Floor Plate.
- Wet or dry, ALGRIP prevents slipping—even on steep inclines!
- Light, tough—thinner sections can be used.
- Easy to install—needs no maintenance.
- Over 1001 plant and product applications—wherever men walk or climb.

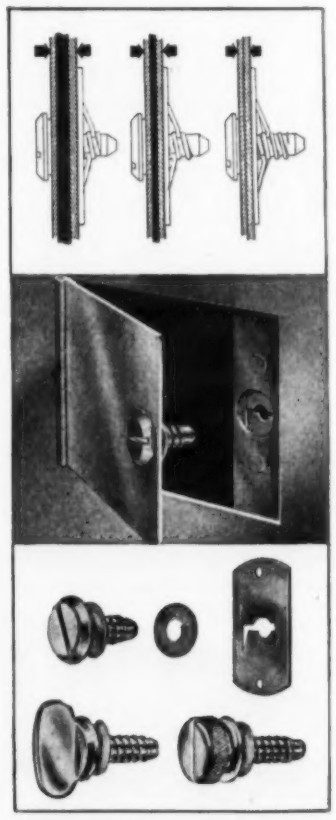
THERE'S NEVER A SLIP ON A.W. ALGRIP

A.W. ALGRIP
ABRASIVE ROLLED STEEL FLOOR PLATE
Product of ALAN WOOD STEEL COMPANY
Conshohocken, Pa.
Over 125 Years of Iron and Steel Making Experience

Other Products: PERMACLAD Stainless Clad Steel A W SUPER-DIAMOND Floor Plate Plates Sheets · Strip · (Alloy and Special Grades)

For more details circle NED-127 on enclosed inquiry slip

through thick or thin— *one fastener*



each grip length serves a wide range of thicknesses— to speed assembly and simplify stock requirements

In many ways, you save time and money with Southco Screw Fasteners. In countless applications, the wide grip range is but one of many advantages. Tension is always uniform, never too tight or too loose. A turn of the screw locks or unlocks, instantly. Installation is easy, without special equipment. Tapped holes are eliminated, along with screws, bolts, lock nuts, lock washers, etc. Alignment is not critical because fasteners "float" in the outer panel. Skilled help is not required. Even if access plates or doors or frames become warped, Southco Fasteners continue to perform, easily and efficiently, for the life of the assembly.

You get all these advantages and more, when you use Southco Fasteners. For complete information write Southco Div., South Chester Corp., 1413 Finance Bldg., Philadelphia 2, Pa.

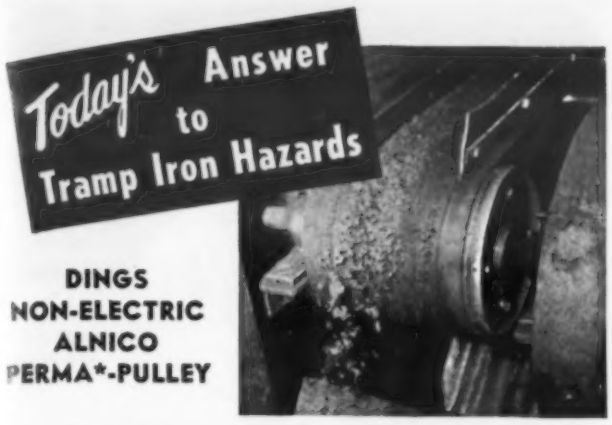
Important for military contractors! Prompt deliveries now possible!

SOUTHCO® FASTENERS

PAWL, SCREW AND SPRING • DRIVE RIVETS
ANCHOR NUTS • ENGINEERED SPECIALTIES
OFFICES IN PRINCIPAL CITIES

WHEREVER TWO OR MORE PARTS ARE FASTENED TOGETHER, STANDARD AND SPECIAL DESIGNS FOR IMPROVED PERFORMANCE AND LOWER PRODUCTION COSTS

For more details circle NED-128 on enclosed inquiry slip



DINGS NON-ELECTRIC ALNICO PERMA*-PULLEY

REMOVING damaging tramp iron the Perma-Pulley way brings you a combination of advantages unmatched by any other tramp iron separator:

- **Automatic** — unaffected by power failures, requires no attention. Just install it and forget it.
- **No Maintenance** — no wiring, no electrical accessories to require repairs or replacement.
- **No Operating Cost** — pays for itself in power savings.
- **Magnetic Permanence Guaranteed** for the life of the installation.
- **Powerful** — Tremendous surface strength means positive tramp iron removal.

Simple to install, lightweight, made of the highest grade Alnico, the Perma-Pulley is backed by over 50 years' experience in the design and manufacture of magnetic separators by Dings for all industry. *Write for catalog.*

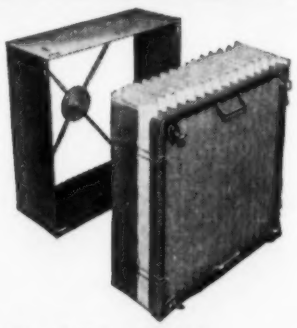
DINGS MAGNETIC SEPARATOR CO.
4758 W. ELECTRIC AVENUE
MILWAUKEE 14, WIS.

Dings "HIGH INTENSITY"
*Registered Trade Mark

For more details circle NED-129 on enclosed inquiry slip

FRENCH & HECHT DIVISION
KELSEY-HAYES WHEEL COMPANY
DAVENPORT, IOWA, U. S. A.

For more details circle NED-130 on enclosed inquiry slip



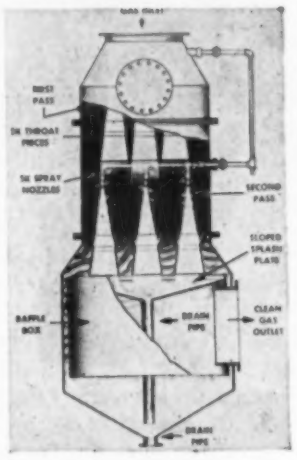
LOW COST *Electronic* AIR FILTRATION

The Electro-PL is a unique dry-type, electronic air filter. Designed to provide intermediate air cleaning efficiency with maximum economy, it is now widely used for industrial, commercial and military installations. These total more than 5,000,000 cfm. The Electro-PL is dual-purpose . . . may be operated as either a dry-type air filter or with the electronic feature as seasonal conditions vary. Available in standard units for straight or "V" bank arrangements to meet almost any air volume requirements. For complete details write for Engineering Bulletin No. 257.

American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Ky.
American Air Filter of Canada, Ltd., Montreal, P. Q.
Pacific Division Office, San Francisco, California

For more details circle NED-131 on enclosed inquiry slip

GAS SCRUBBER
packaged units can be combined for handling various volumes

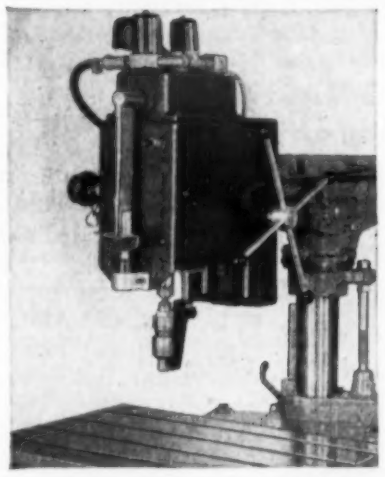


Gases and fumes containing wettable solids and condensable gases are cleaned by washing action in this line of packaged gas scrubbers. Equipment will also remove gases and solids by means of chemical reaction between the gas or solids and a selected spray liquid. For example, nonwettable carbon black or metal oxides can be removed by introducing a suitable wetting agent into the spray liquid.

Units consist of scrubber box, spray nozzles and throat pieces. As many banks of scrubber boxes as may be required can be combined in single unit, though two are sufficient for most operations. Numbers of banks, nozzles and throat pieces per bank are determined by volume and characteristics of the gas and scrubbing efficiency desired. Made by **Schutte & Koerting Co.**, Dept. J-I, Cornwells Heights, Bucks County, Pa.

For more details circle NED-132 on enclosed inquiry slip

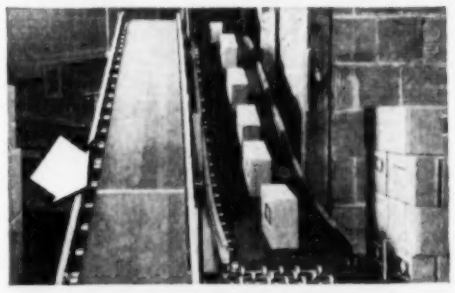
TORQUE DRIVING TOOL
also tests preloaded bearings



By measuring torque in motion, Power-Torque tool can be used for nut running, screw driving and driving various types of fasteners, as well as torque-testing preloaded bearing assemblies on a moving production line. Torque handling range is from 0 to 230 lb-in. on standard models; custom models can be made for higher torque requirements. Model MA-500 (illustrated) is air driven and requires mounting, in this view on a Walker-Turner radial drill press. Torque is controlled to within 2 per cent of prescribed torque limits. Tools are offered with air, electric or high cycle electric motors. Stud drivers have a built-in reversing system. Quick-change wrenches are available. Made by **Garvin Brothers, Inc.**, Dept. C, P. O. Box 536, South Bend 24, Ind.

For more details circle NED-133 on enclosed inquiry slip

ALLIGATOR®
CONVEYOR BELT LACING



*Every Tooth A Vise**

in Long Continuous Lengths for Conveyor Belts . . . . .

- ★ Excellent for Package Conveyors, Portable Loaders, Trenching and Ditching Machines, etc.
- ★ In canneries where corrosion or rust is a problem specify Alligator made of Stainless or Monel.
- ★ For magnetic separators or anti-sparking specify Alligator made of Everdur.
- ★ Separable and smooth on both sides.
- ★ 12 sizes. For belts from 1/16" to 5/8" thick— and *any width.*

Order from Your Supply House. Ask for Bulletin A-60.

FLEXIBLE STEEL LACING CO. 4664 Lexington St., Chicago 44, Ill.

JUST A HAMMER TO APPLY IT

For more details circle NED-134 on enclosed inquiry slip

NOW! A NEW CONCEPT IN CONCRETE FLOORS.. *YEARS AHEAD*

The Dynapakt system is years ahead providing the best concrete floors that can be obtained. Used for topping new or old floor bases, Dynapakt is concrete at its modern best. Users benefit from the high strength floors that have never been achieved before!

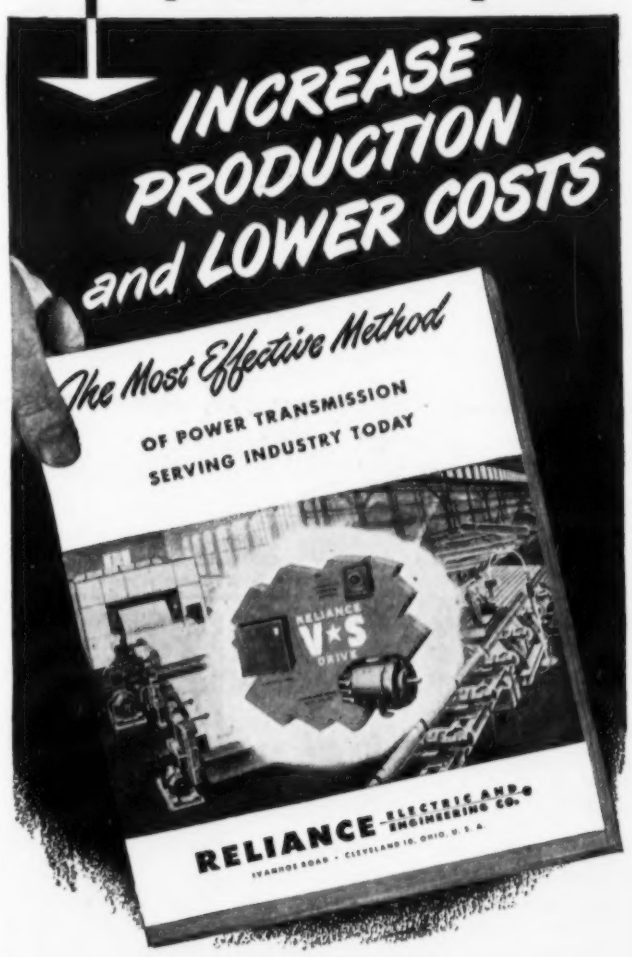
GET THE COMPLETE FACTS. WRITE FOR THE NEW ILLUSTRATED BROCHURE..."TRAFFIC CONCRETE, A STUDY IN SPECIALIZATION".

FLASH-STONE COMPANY, Inc.
3723 PULASKI AVENUE, PHILADELPHIA 40, PENNA.

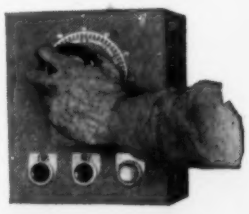
specialists in industrial floor installations . . . *nationally*

For more details circle NED-135 on enclosed inquiry slip

Here's New Data
on Industry's proven way to
INCREASE PRODUCTION and LOWER COSTS



Contact your nearest Reliance Sales Representative or write us direct for your copy of this new Bulletin D-2311 on Reliance V★S, the all-electric, adjustable-speed drive for A-c. circuits. Describes V★S features and characteristics, shows typical V★S applications.



Reliance V★S Drive features convenient-to-operate controls grouped and located where your operator can quickly, easily and safely control all functions of his machine.

RELIANCE ELECTRIC AND ENGINEERING CO.
1082 IVANHOE ROAD • CLEVELAND 10, OHIO

Sales Representatives in Principal Cities

For more details circle NED-136 on enclosed inquiry slip

The New Super-Hard Carbide Drill

Up to 200% Greater Life

A Better Drill For Hardened Steel

Long carbide end keeps cutting heat away from braze.

Write for Catalog Supplement No. 4

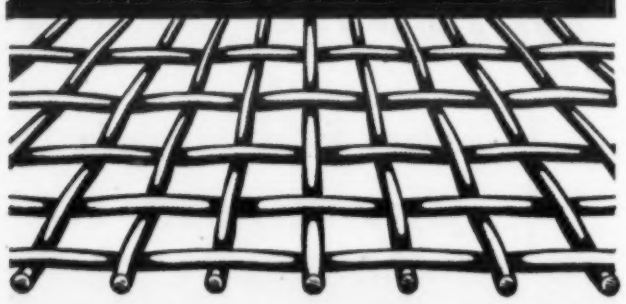
QUALITY CARBIDE TOOLS

Super TOOL COMPANY

21650 Hoover Rd., Detroit 13 • 5210 San Fernando Rd., Glendale 3

For more details circle NED-137 on enclosed inquiry slip

CAL-WIC WIRE CLOTH



meets all STANDARD and SPECIAL requirements

Either as original equipment or for specialized uses in filtering, screening, grading, cleaning or processing, Cal-Wic Wire Cloth is available in the right weave, mesh and weight to give you long-wearing, dependable service.

Made in different types of metals and alloys for high resistance to chemical action, corrosion, abrasion and temperature extremes.

For additional information write or phone our nearest sales office.

THE COLORADO FUEL & IRON CORPORATION – Denver, Colorado
THE CALIFORNIA WIRE CLOTH CORPORATION – Oakland, California
WICKWIRE SPENCER STEEL DIVISION – Clinton, Massachusetts

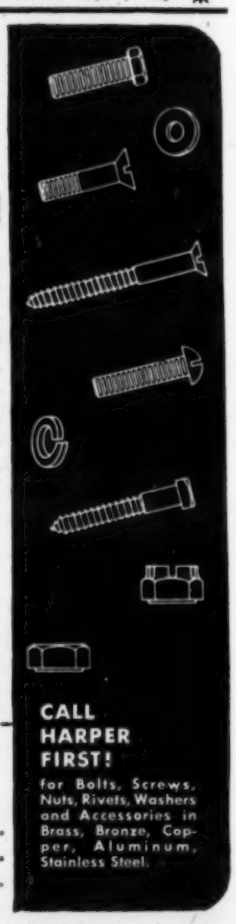
CAL-WIC INDUSTRIAL SCREENS CFI
THE COLORADO FUEL AND IRON CORPORATION

For more details circle NED-138 on enclosed inquiry slip

HARPER

Specialist in *all* Non-Corrosive Fastenings!

Call Harper *first!* America's largest producer of non-ferrous and stainless steel fastenings—specializing in bolts, screws, nuts, rivets, washers and accessories in brass, bronze, copper, aluminum, Monel, stainless steel—to solve your problems in corrosion, heat, abrasion and stress. Over 7,000 items stocked by warehouses and distributors from coast to coast.



FREE—*this 56-page Harper Price List and Stock Book.*

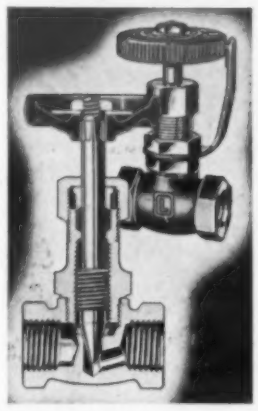
HARPER EVERLASTING FASTENINGS

CALL HARPER FIRST!
for Bolts, Screws, Nuts, Rivets, Washers and Accessories in Brass, Bronze, Copper, Aluminum, Stainless Steel.

The H. M. Harper Company
8212 Lehigh Ave.,
Morton Grove, Ill.
Rush Harper Price List and Stock Book.
Name.....
Address.....
City.....State.....

For more details circle NED-139 on enclosed inquiry slip

BRONZE NEEDLE VALVE
for pin-point control on small lines



Offered in range of sizes from ⅛ to 1-in. and in globe and angle patterns, gland type bronze needle valve is ideal for pin-point control on small lines where fine regulation of flow is essential. Non-Slip handwheel is employed. Also available is indicator model with number graduations on face of handwheel and spring clip to engage serrations on wheel and hold setting. This valve can be set to any predetermined opening. Made by **Lunkenheimer Co.**, P. O. Box 360-KK, Cincinnati 14, O.

For more details circle NED-140 on enclosed inquiry slip

HEAVY DUTY STEEL DOLLY
moves heavy racks and cabinets

Designed to facilitate the moving of heavy racks and cabinets, this 21 x 22-in. dolly is black wrinkle finished steel and is fitted with four ball-bearing, swivel casters. Dolly is especially useful in laboratories, service shops, and radio and TV stations, where test instruments, oscilloscopes, transmitters, receivers, etc., must be shifted from place to place. Made by **Insuline Corp. of America**, Dept. NE, 36-02 35th Ave., Long Island City 1, N. Y.

For more details circle NED-141 on enclosed inquiry slip

PHOTOCOPYING MACHINE
copies any size office form

Virtually automatic in operation, the Copyflex 14 desk-side machine can copy any size office form up to 20 in. wide. Anything typed, written, printed or drawn can be reproduced, with no special lighting, tray developing or installation being required. Cost averages less than 2 cents per square foot of copy. Machine takes up less than a square yard of floor space, can be rolled to any worksite and requires only a connection to a 115-v, 60-cycle ac line. Operator can be trained in 5 minutes. Made by **Charles Bruning Co.**, Dept. W, 125 North St., Teterboro, N. J.

For more details circle NED-142 on enclosed inquiry slip

TEFLON TAPES

C-D-F takes duPont's Teflon and processes it into insulating tapes with exceptional resistance to moisture, arcing, and high heat. Available in unsupported or glass fibre fabric base; wide range of thicknesses and widths. For the best in tapes of Teflon, buy from C-D-F!

TEFLON SHEETS

C-D-F makes news with Teflon. A variety of Teflon glass base laminates are available with copper foil surfaces, suitable for etching of printed circuits. Exceptionally good bond strength, high heat resistance, low and stable dielectric loss properties. C-D-F glass supported or unsupported sheets may be formed for channel blanks or armature and field coil insulation.

WRITE NOW! C-D-F offers a valuable technical folder on Teflon, complete with samples, sizes, specifications, applications. If your work involves insulating materials . . . you need this information from C-D-F.

CDF Continental-Diamond Fibre Company
NEWARK 30, DELAWARE

For more details circle NED-143 on enclosed inquiry slip

HERE IS A COMPACT DURABLE CHEMICAL TRANSFER PUMP FOR HANDLING PROCESS LIQUIDS

HIGH QUALITY
EASILY SERVICED

PEERLESS TYPE CTB PUMP

PEERLESS PUMPS

TYPE CTB CHARACTERISTICS
HEADS: 10-140 ft.
CAPACITIES: 10-250 gpm
HP RANGE: 1-10 hp
LIQUID TEMPERATURE: up to 250° F

Liquid End Made of Type #20 Stainless Steel Alloy

Handles corrosive and abrasive liquids at moderate temperatures and pressures. Write today for Peerless pump Bulletin No. B-1606. Profusely illustrated with pump views, sectional drawings, elevations and dimensions. Contains complete head-capacity data and details of Peerless construction.

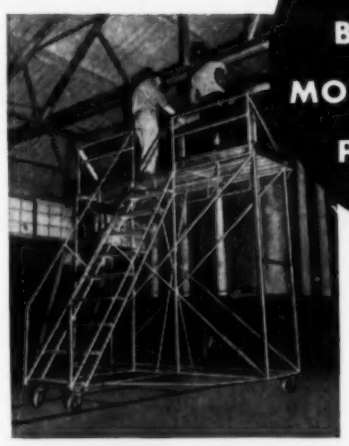
PEERLESS PUMP DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION

Los Angeles 31, California and Indianapolis 8, Indiana
Offices: New York, Chicago, St. Louis, Atlanta; Dallas, Plainview and Lubbock, Texas; Fresno, Los Angeles; Phoenix; Albuquerque, N. M.; Tulsa

For more details circle NED-144 on enclosed inquiry slip

LARGE... FIRM WORK AREA

PROVIDED BY BALLYMORE MOVABLE WORK PLATFORMS



SPEEDS PRODUCTION

You, like the Gindy Mfg. Corp., trailer manufacturers of Downingtown, Pa., can increase production safely by using Ballymore work platforms to reach high places. Formerly, only one man could work on the scaffold that was used. Now, two men work comfortably on the larger area of the Ballymore platforms.

All tools required for the job are taken up to the work area, eliminating running up and down. In addition, the platform is *rolled* easily to any position in the plant, then is anchored to the floor by a treadle system.

Ballymore work platforms can be built to your particular requirements with strength to meet specified loading conditions. Write today for additional information to Ballymore Co., Wayne 2, Pa.

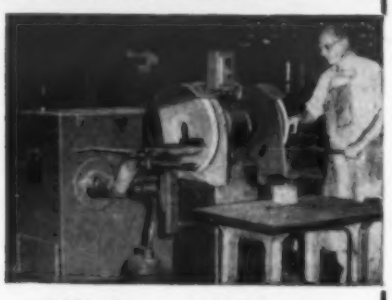
Ballymore

BALLYMORE WORK PLATFORMS

For more details circle NED-145 on enclosed inquiry slip

STOP DUST

Instantly with DUSTKOP



DUSTKOP ▶ 1400 cfm

▼ DUSTKOP 3600 cfm

300 cfm to 10,000 cfm per unit (22 models).

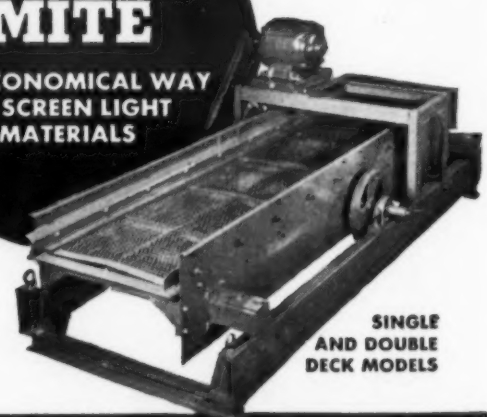
Standard, pre-tested, available from stock. Ask for catalog 605-2. Describe dust problem for recommendation by return mail. No obligation.

AGET-DETROIT CO.
201 Main St.
Ann Arbor, Mich.

▲ For more details circle NED-146 on enclosed inquiry slip ▲

MIGHTY-MITE

THE ECONOMICAL WAY TO SCREEN LIGHT MATERIALS



SINGLE AND DOUBLE DECK MODELS

Speeds Up Sizing, Dedusting, Reclaiming

Put a Mighty-Mite to work and you'll minimize time and labor requirements for screening sand, candies, nuts, tumbler chips and hundreds of other materials. Safe, efficient, proven for light duty. Sizes 1½' x 4' to 2' x 8'. Send for folder, Dept. P.

Made By The Makers of SECO VIBRATING SCREENS

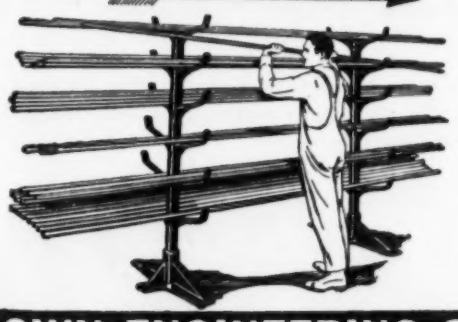
SCREEN EQUIPMENT CO., INC.
1752 WALDEN AVE., BUFFALO 25, NEW YORK
In Canada, United Steel Corp. Ltd., Toronto, Ont.

▲ For more details circle NED-147 on enclosed inquiry slip ▲

SPEEDS UP STOCK-ROOM SERVICE

The BROWN TIME-SAVING RACK saves the time previously lost end-hauling each bar of stock its entire length from the old-style, closed-side Rack, the Brown Rack requiring but a few inches of side movement. Each length, width and thickness of stock is displayed in goldfish visibility for instant selection. Workmen waiting for stock are served without waste of time, and returned to their production machines to turn out a maximum of output. Any time you require additional storage space, all you need do is to add more units. If you want to relocate it at any time, you can do so for it is unattached to the building. It is a simple, durable article made of metal in five styles. It can't burn, warp, sag or twist; depreciation is practically nil. SEND FOR BULLETIN No. 26-D DESCRIBING—

BROWN'S *QUICK-SERVE* RACKS



BROWN ENGINEERING CO.
129 N. THIRD ST. READING, PENNA.
RACKS • VISES • CLUTCHES • COUPLINGS

▲ For more details circle NED-148 on enclosed inquiry slip ▲

TAG IMPRINTING MACHINE
uses spirit duplicating process

Shipping tags or labels can be imprinted with up to 14 lines of type, about 154 characters, horizontally or vertically and at a rate of 430 tags per minute with the American 400 rotary imprinting machine. Machine prints by spirit duplicating process. Master copy is prepared with standard typewriter. Changing from one size tag to another requires only turn of knob, all internal mechanical changes being accomplished simultaneously. Machine features sealed ball bearings, weighs 45 lb and has light blue crackle finish. Made by **American Tag Co.**, 150 Cortlandt St., Belleville 9, N. J.

▲ For more details circle NED-149 on enclosed inquiry slip ▲

RADIATOR AIR VALVE
usable on hot water heating systems

Actually two valves in one, Duovent air valve for hot water systems shifts from manual to automatic venting with finger tip regulation. In manual venting, air escapes directly through vent at base. In automatic venting, a hollow pin blocks this passage. Air escapes up through pin and out through ports in upper portion of valve. Hygroscopic disks, which swell immediately when contacted by water, close the ports after air has been vented. Twist of top half of valve changes it from manual to automatic. Made by **Keeney Mfg. Co.**, 1170 Main St., Newington, Conn.

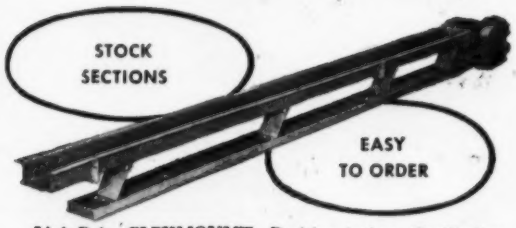
▲ For more details circle NED-150 on enclosed inquiry slip ▲

SMALL TOGGLE SWITCHES
for in-assembly installation

Where precise switching components must be located in unusually small space, as inside assemblies, ISMI series of small toggle switches are highly practical. Model 6AT2 is single-pole, double-throw assembly employing one switch rivited into stainless toggle bracket. Unit 6AT3 includes two switches for double-pole, double-throw service. Ratings are 2 amp, 20 v dc, or 5 amp at 125 or 250 v ac. Panel mounting is by means of hex nuts. Made by **Minneapolis-Honeywell Regulator Co.**, Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

▲ For more details circle NED-151 on enclosed inquiry slip ▲

NOW! FLEXMOUNT Oscillating Conveyors available from stock!



Link-Belt FLEXMOUNT Positive-Action Oscillating Conveyors offer unique advantages on a wide range of hard-to-handle materials—fine, lumpy, stringy . . . materials in food and chemical process industries . . . sharp, oily chips and turnings . . . hot sintered materials, etc. Uniform, gentle flow is achieved with Positive-Action. Leak-proof, all-metal trough can be made dust-tight. Extremely compact, low in operating costs.

WRITE FOR BOOK 2478

LINK-BELT

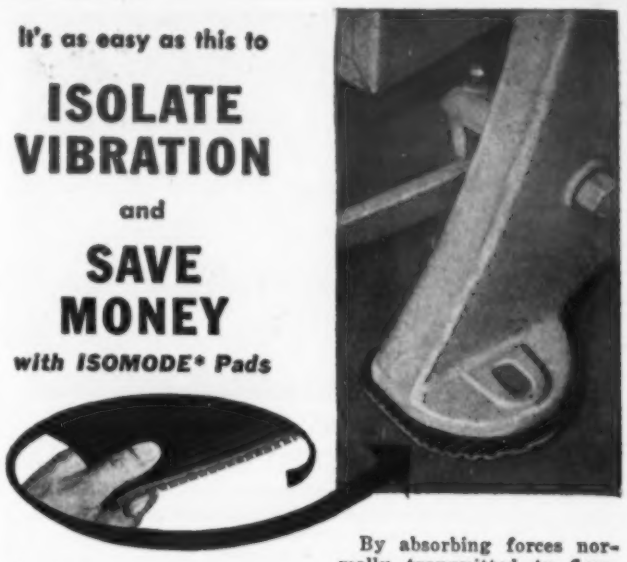
LINK-BELT COMPANY Plants: Chicago, Indianapolis, Philadelphia, Atlanta, Houston, Minneapolis, San Francisco, Los Angeles, Seattle, Toronto, Springs (South Africa), Sydney (Australia). Sales Offices, Factory Branch Stores and Distributors in Principal Cities. 12,567

▲ For more details circle NED-152 on enclosed inquiry slip ▲

It's as easy as this to

ISOLATE VIBRATION and SAVE MONEY

with ISOMODE Pads*



Here's the durable mounting to absorb shock...reduce noise ...cut your maintenance costs. In hundreds of installations, the Isomode Pad has proved to be not only one of the most economical mounts, but also one which does a superior job of isolating vibration.

By absorbing forces normally transmitted to floor, Isomode Pads reduce building damage and undue deterioration of machinery. No bolting in most cases.

Made of oil, age- and water-resistant Du Pont Neoprene. Write for details—discover their surprisingly low cost.

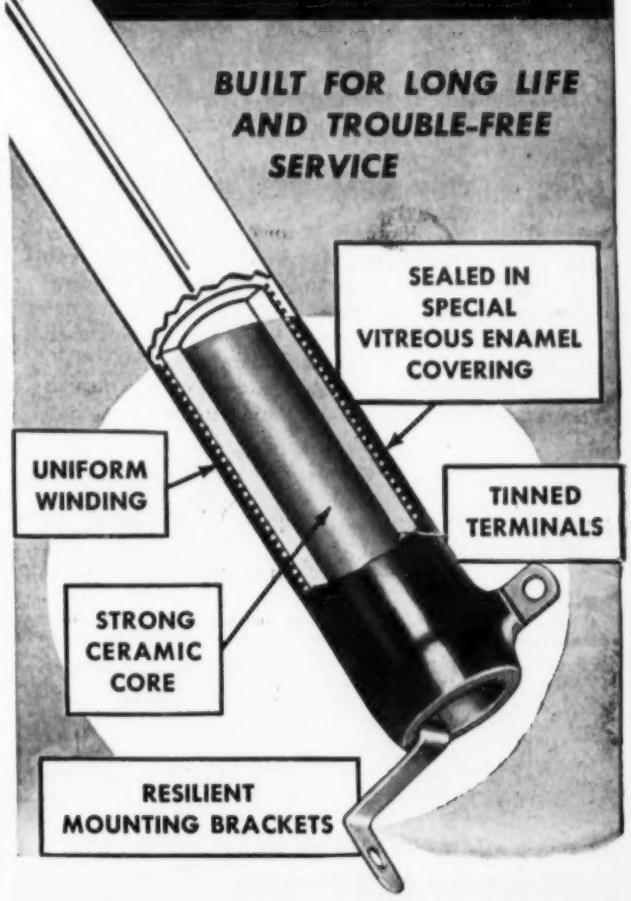
**Trade Mark Reg. U.S. Pat. Off.*

THE MB MANUFACTURING COMPANY, INC.
1066 State St., New Haven 11, Conn.

▲ For more details circle NED-153 on enclosed inquiry slip ▲

OHMITE WIRE-WOUND RESISTORS

BUILT FOR LONG LIFE AND TROUBLE-FREE SERVICE



Ohmite wire-wound resistors are ruggedly constructed to withstand shock, heat, fumes, and humidity. A sturdy ceramic core provides a strong base for the resistance wire, which is wound with an unsurpassed uniformity to prevent "hot spots." This winding is held rigidly in place and protected by a special vitreous enamel coating. Terminal lugs are tin-dipped for ease in soldering, and windings are brazed or welded to the lugs to assure perfect connection. Ohmite resistors are available in a wide range of types and resistance values, in ratings from 5 to 200 watts.

Write on company letterhead for Engineering Catalog No. 40

OHMITE MANUFACTURING CO.
4842 Flournoy St., Chicago 44, Ill.

Be Right with OHMITE

RHEOSTATS • RESISTORS • TAP SWITCHES

▲ For more details circle NED-154 on enclosed inquiry slip ▲

WANT A TABLE GUMMER GLUE THAT REALLY WORKS?

Paisley research has developed three *brand new* Table Gummer Glues..

1. TABLE GUMMER ***BOTTLE LABEL*** GLUE
2. TABLE GUMMER ***TIN CONTAINER*** GLUE
3. TABLE GUMMER ***SHIPPING LABEL*** GLUE

Each of these fine new adhesives possesses distinctive characteristics. Each one is specially designed for the job it has to do. No *one* all-purpose Table Gummer Glue can work with the same speed and efficiency on tin, glass, paper and other packaging materials. Now, with the right kind of PAISLEY Table Gummer Glue, labeling operations of this type can be performed with greater speed and efficiency. Labels *stay put* . . no shifting or falling off. Loose, torn edges, and spotty gumming are eliminated. Order a trial shipment TODAY, or send for free Adhesive Operation Data Sheet.

Paisley SCIENTIFIC ADHESIVE SERVICE

PAISLEY PRODUCTS INCORPORATED
Manufacturers of Glues, Pastes, Resin Adhesives, Cements and Related Chemical Products
1770 CANALPORT AVE., CHICAGO 16, ILL. ★ 630 W. 51st STREET, NEW YORK 19, N. Y.

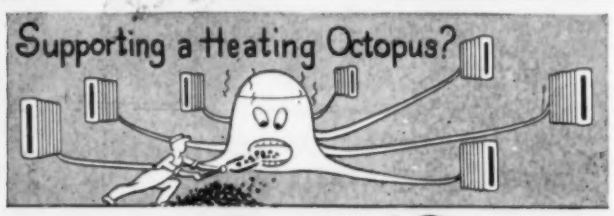
▲ For more details circle **NED-155** on enclosed inquiry slip ▲

2 standards meet most requirements

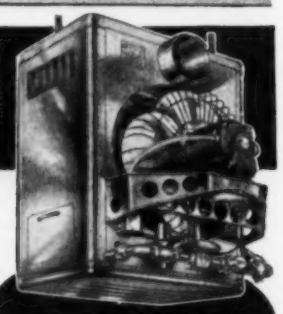
UNBRAKO precision-ground dowel pins are regularly furnished in two *Standard* types: blue label pins made +.0002″ oversize to meet nominal press fit requirements; red label pins made +.001″ oversize for use as *repair pins*. Both have a 6 microinch maximum surface finish and a diameter tolerance of ±0.0001″. Write for descriptive literature. STANDARD PRESSED STEEL CO., Jenkintown 24, Pennsylvania.

UNBRAKO SOCKET SCREW DIVISION SPS JENKINTOWN PENNSYLVANIA

▲ For more details circle **NED-156** on enclosed inquiry slip ▲



Each REZNOR GAS UNIT HEATER IS A COMPLETE HEATING MACHINE



★ NO LOSS from heat transmission
★ MAKES HEAT where you want warmth
★ SPOT-LOCATE as many REZNORS as you need (no interconnection)
★ ADD to the system as you want (no leaders to run)

REZNOR IS MODERN . . .
—As many diesel locomotives add or subtract power units as power is needed, Reznor units can be put into or withdrawn from service as heat is needed. REZNOR is efficient. REZNORS install quickly. Before you install any heating—primary or auxiliary, check REZNOR.

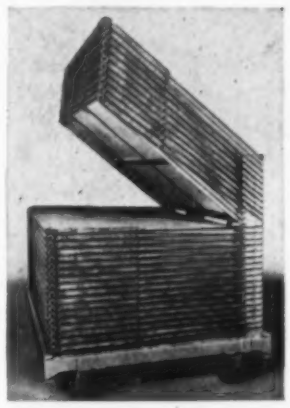
REZNOR WORLD'S LARGEST-SELLING GAS UNIT HEATER

REZNOR MANUFACTURING CO.
14 UNION ST. · MERCER, PENNA.
Send me 20-page catalog in full color

Name_____
Firm_____
Address_____
City_____ Zone____ State____

▲ For more details circle **NED-157** on enclosed inquiry slip ▲

SPRING LEAF TRUCK
any size and leaf spacing possible



Large quantities of small parts or materials which cannot be stacked or should not contact each other can be stored and handled between operations in this type Multi-Shelf spring leaf truck. Base is heavy steel channel stock and carries upright frame at one side on which shelves are hinged. Two coil springs one on a side, hold each leaf either in up position or locked horizontally. Units can be built in any size and with any spacing between leaves. Illustrated is 48 x 63-in. 30-shelf truck built for large tire manufacturer. Any hand or power lift truck can be used to move it. Made by **Karl A. Herman Co.**, 333a W. Fulton St., Grand Rapids, Mich.

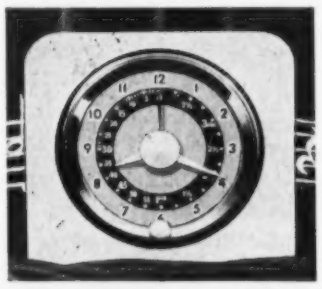
▲ For more details circle **NED-158** on enclosed inquiry slip ▲

PIN-POINT SOLDERING IRON
elements and tips are replacable

Tip diameter of this 3-oz, 25-w soldering iron is only ⅛-in. for precision soldering work inside fine instruments and small electronic devices. Although tiny in size, iron has nickel-chromium, mica-wound elements and will stand up under constant use on production lines. Iron is furnished for either 110 or 220-v dc or ac. Elements, tips and other parts are readily replaceable. Made by **Hexacon Electric Co.**, 145 W. Clay Ave., Roselle Park, N. J.

▲ For more details circle **NED-159** on enclosed inquiry slip ▲

ELECTRIC CLOCK-TIMER
features bell chime signal



A clear-toned bell chime signal, plus one button "twist and forget" setting from one minute to four hours are features of series 5400 combination electric clock and Minute Minder. When time is up, bell chimes once each second until shut off. This clock-timer combination has striking gold dial and polished chrome bezel. Made by **Lux Clock Mfg. Co.**, Dept. P, Waterbury 20, Conn.

▲ For more details circle **NED-160** on enclosed inquiry slip ▲

PRECISION BORING with MAX-WELL-MADE MASTUR TOOLS

The **MASTUR** adjustable boring head takes heavier cuts at higher speeds. Adjustable to 0.0002-inch, this tool handles both rough and finish operations on boring and milling machines as well as automatics.

Small and compact, the **MASTUR** precision boring head can be inserted easily and positioned rapidly. Both body and block are made of heat-treated alloy steel. Tool block is dove-tailed into body, and all fitting surfaces are ground to assure precision fit and long service life.

Adjusting screw head is graduated into 50 divisions to provide readings in **thousandths**, and body is graduated to permit vernier readings of 0.0002-inch. Three models are available having maximum boring bar capacities of ½, ¾ and 1 inch, with boring range from ⅜ to 15 inches.

Write for catalog.

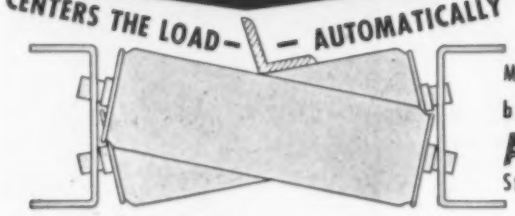
891-MC

THE MAXWELL COMPANY
380 Broadway • Bedford, Ohio

▲ For more details circle **NED-161** on enclosed inquiry slip ▲

VEE-CONVEYOR

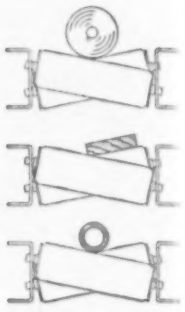
CENTERS THE LOAD— —AUTOMATICALLY



Made by **ALVEY** St. Louis

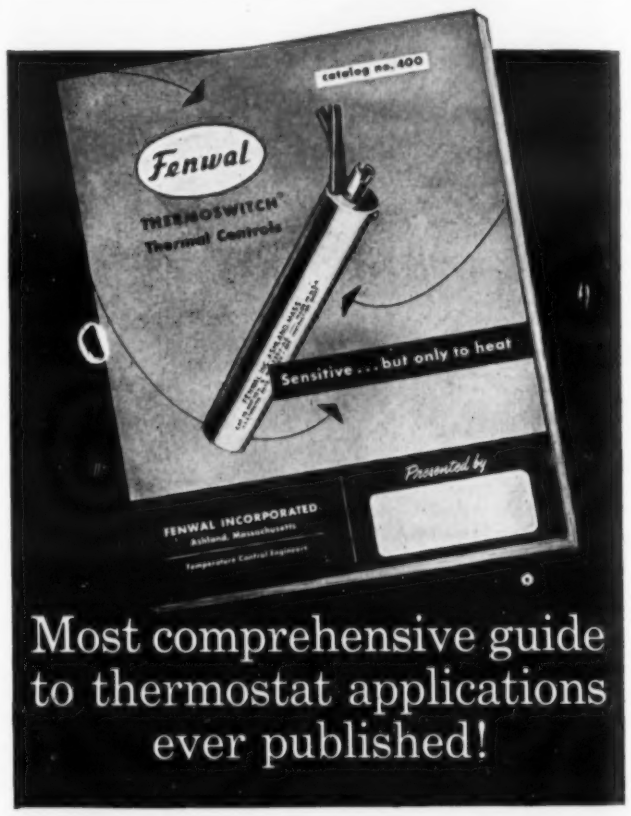
Rollers are slightly tilted in alternate directions . . . pipe, boards, bars, shapes and shells of all kinds roll smoothly and safely without side guards.

Alvey VEE-Conveyors are built in varying widths and load capacities to meet a wide range of requirements. Perhaps they will solve your conveyor problem. For complete information, please write:



ALVEY CONVEYOR MFG. CO.
9259 OLIVE STREET ROAD • ST. LOUIS 24, MISSOURI
Branch Offices in Principal Cities

▲ For more details circle **NED-162** on enclosed inquiry slip ▲



Most comprehensive guide to thermostat applications ever published!

Get your copy of unusual 52-page catalog today!

Find out *now* how you can get closer temperature control at lower cost. Illustrated, 52-page catalog shows you:

WHY Fenwal THERMOSWITCH® thermostats respond at the preset temperature you want (between —100°F and +1500°F) within the desired operating differential (can approach 0.1°F in a well-designed system).

HOW to choose the right THERMOSWITCH unit from the ten standard types for controlling temperatures of solids, liquids or gases.

WHERE to apply THERMOSWITCH controls in relation to heating elements in ovens, incubators, stills, dryers and other equipment.

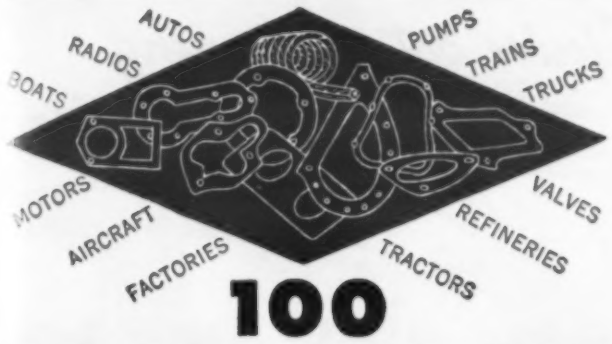
WHEN special modifications may be added to standard THERMOSWITCH units to fit specific conditions.

HOW MUCH standard THERMOSWITCH thermostats and special modifications cost. You'll be surprised at the low list prices.

SEND FOR YOUR FREE COPY of this Fenwal catalog (No. 400) today. Fenwal, Incorporated, 89 Pleasant St., Ashland, Mass.

Fenwal
THERMOSWITCH®
Electric Temperature Control and Detection Devices
SENSITIVE...*but only to heat*

▲ For more details circle **NED-163** on enclosed inquiry slip ▲



100 OR 100,000,000

GASKETS • PACKINGS • DIE-CUTS

for EVERY industry

Whatever your needs—100 gaskets or 100,000,000—standard materials or special—you can rely on Fel-Pro to furnish exactly the right item for your particular service. The entire facilities of three modern plants and over 30 years of experience in supplying gaskets, packings and die-cuts to industry are at your disposal. For FREE Portfolio, containing samples of over 50 materials for solving special problems, write TODAY to:

FELT PRODUCTS MFG. CO., 1510 Carroll Avenue, Chicago 7, Ill.
Warehouses in: Atlanta, Boston, Dallas, New York, Los Angeles, Oakland, Portland

FEL-PRO Utilize Newest Materials
ENGINEERED
Specifically designed for your product **gaskets**

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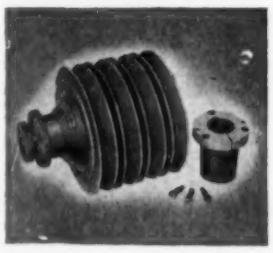
MAXI-PICH V-BELT SHEAVES

Four reasons why— YOU SHOULD DEMAND

"V-BELT" MAXI-PICH Stationary & Motion Control Sheaves



They're engineered for rugged performance from best grades of heat-treated steel and soft-gray iron castings.

You get every advantage of other sheaves **plus** these 4 outstanding features—

1. MAXIMUM PITCH DIAMETER VARIATION
2. CONSTANT BELT ALIGNMENT
3. INTERCHANGEABLE BUSHINGS
4. USES COMMERCIAL V-BELT AND COMPANION SHEAVE

"V-Belt" Maxi-Pich Sheaves fit any factory machine—save installation and operating costs—speed production. For the FULL STORY, ask your "V-Belt" dealer, or write to the V-Belt Engineering Co., Richmond, Va.

V-BELT ENGINEERING COMPANY
RICHMOND, VIRGINIA

▲ For more details circle **NED-165** on enclosed inquiry slip ▲

BRITEWAY

The Liquid Soap Floor Cleaner Used With Hard Or Soft Water

Economical! one cup to a pail of water

Won't separate or freeze even at 16 below freezing!

Looking for an all-purpose liquid soap cleaner that will do its job well under all conditions? The answer is BRITEWAY, Dolge-developed and tested to surmount hard-water and temperature-change barriers.

BRITEWAY will not separate, jell or harden even in sub-zero weather. Just put one economical cupful in a pail of water and watch it "suds-up" into a rich, cleansing lather. Approved by the U. S. Rubber Flooring Manufacturers Assn., for use on rubber floors. Excellent, too, for linoleum, mastic, wood—and painted or varnished surfaces.

On floors, apply BRITEWAY with a mop; on walls with a cloth. Just rinse off, and your job's done! BRITEWAY removes RUBBER BURNS completely!

Your Floors—and Walls—Will Appreciate Briteway

Dependable **DOLGE**
WESTPORT, CONNECTICUT

▲ For more details circle **NED-166** on enclosed inquiry slip ▲

SOLDER POT
designed for dip soldering

Large assemblies and printed circuit units can be dip soldered in model No. 85 soldering pot. It features ceramic embedded heating elements with thermostatic control. Adjustable legs provide for leveling, and a detachable tray at one end receives dross. Inside dimensions are 12 x 6 x 2⅛ in. The 900-w unit operates on 110-v ac and has temperature range from 450 to 700° F. Matching units with aluminum crucibles serve as heated wax pot and alcohol vapor bath for flux removal. Made by **Dee Electric Co.**, 1105 N. Paulina St., Chicago 22, Ill.

▲ For more details circle **NED-167** on enclosed inquiry slip ▲

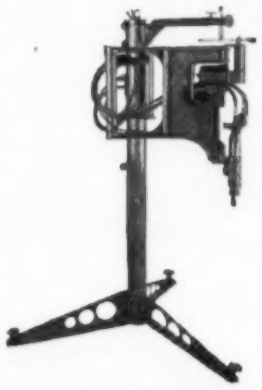
SCREW GAGE
checks machine and wood types

Screw number size of both machine and wood screws from No. 0 to No. 14 is determined readily with this simple taper-slot gage. Diameters can be measured in 64th also. Device is wear compensating and rustproofed. Available free from **Dayton Rogers Mfg. Co.**, 2822 Thirteenth Ave. S., Minneapolis 7, Minn.

▲ For more details circle **NED-168** on enclosed inquiry slip ▲

TORCH GUIDING MACHINE
handles work to 1/64-in. tolerance

Automatic control of speed and path of cutting torch travel is provided by the Ultra-Graph oxyacetylene torch guiding machine in fabrication of both large and small steel parts. A strong permanent magnetic field attracts power driven friction rotor to edge of steel pattern. Ample speed control for cutting 1/16 to 8-in. thick material is provided, and fine detail work can be handled to tolerance as low as plus or minus 1/64-in. Unlimited variety of pattern shapes can be used including 63-in. straight line, 32-in. diameter complete circle and 76-in. diameter semicircle. Table, standard (pictured) and stub floor models are available. Made by **Iver J. Esbenson Co.**, Merchandise Mart, 1853 Wazee St., Denver 2, Colo.



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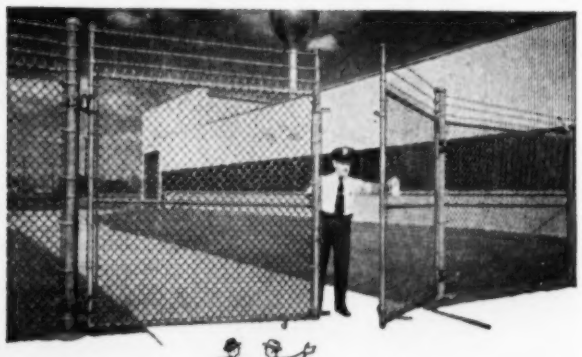
PAGE FENCE *Since 1883*

• AMERICA'S FIRST WIRE FENCE •



Defense against hazards which could hinder or stop production is a major function of Page Chain Link Fence, guardian of persons and property for more than 60 years. Consult the skilled Page Fence erecting firm near you, whose name we will send with fence data on request. Cost estimates, no obligation. For information:

Write to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

▲ For more details circle **NED-170** on enclosed inquiry slip ▲

Save Installation Time!

SPECIFY AN ALLIS-CHALMERS COMBINATION STARTER

WHEN YOU NEED both a magnetic starter and the protection of a safety switch, a neat installation can be made quickly with an Allis-Chalmers circuit breaker type combination starter. Starter and switch are factory assembled and wired in a single enclosure to save you installation time and space.

You get a starter that has long-lasting contacts, non-carbonizing arc chambers and easily accessible parts. The circuit breaker gives short circuit protection . . . serves as a disconnect switch.

Combination starters are available in sizes 0 through 5 for motors from fractional to 200 hp, 110-550 volts.

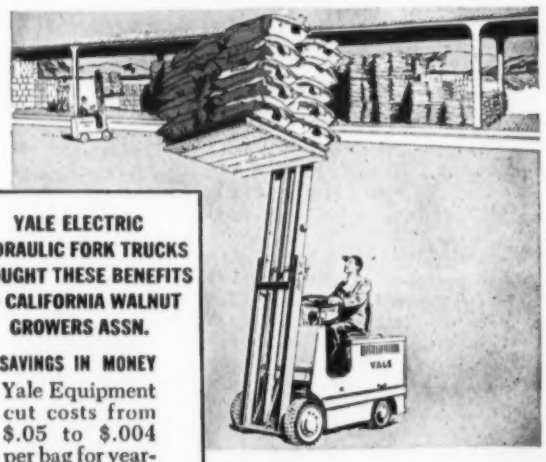
Remember, there is an Allis-Chalmers starter for every motor need. All are designed and constructed for long life, easy inspection, speedy installation. Bulletin 14B7132 describes manual, magnetic, combination, and reversing starters for 110-550 volt motors. Contact your nearby A-C representative, or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-3715

ALLIS-CHALMERS

▲ For more details circle **NED-171** on enclosed inquiry slip ▲

Report to Management from Yale Materials Handling Headquarters:

Important California Industry saves $196,000 yearly with Yale Electric Trucks



YALE ELECTRIC HYDRAULIC FORK TRUCKS BROUGHT THESE BENEFITS TO CALIFORNIA WALNUT GROWERS ASSN.

SAVINGS IN MONEY
Yale Equipment cut costs from $.05 to $.004 per bag for yearly savings of $196,000.

SAVINGS IN MANPOWER
Mechanized Yale equipment released 9 out of 10 men . . . made them available for more productive work.

SAVINGS IN TIME
Yale Equipment ended bottlenecks . . . offered the short-cuts so essential with a highly seasonal product.

WHATEVER YOUR BUSINESS you must move materials from one point to another. And whether your labor force is measured in tens or in thousands . . . efficient, economical handling of materials *often means the difference between profit and loss.*

Yale Materials Handling Equipment is chalking up savings of from 50 to 75% in many businesses that never realized how costly their handling methods were. To learn how YALE can help you affect such savings, mail the coupon below.

YALE
MATERIALS HANDLING EQUIPMENT
YALE is a registered trade mark of The Yale & Towne Manufacturing Co.

MAIL THIS COUPON TODAY
The YALE & TOWNE Manufacturing Co., Dept. 379
Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.
I want to know how Yale Materials Handling Equipment can help me.
☐ Please have your local Representative call.
☐ Please send free copy of THE PICTURE STORY OF YALE MATERIALS HANDLING EQUIPMENT.
Company_____
Name_____ Title_____
Street_____ City_____ State_____
In Canada write: The Yale & Towne Mfg. Co., St. Catharines, Ont.

GAS AND ELECTRIC INDUSTRIAL TRUCKS • WORKSAVERS
HAND TRUCKS • HAND AND ELECTRIC HOISTS • PUL-LIFTS

▲ For more details circle **NED-172** on enclosed inquiry slip ▲

CUT COSTS . . . FASTEN "ON THE DOUBLE" with the Chicago "214" DOUBLE RIVET SETTER

The "214" automatically feeds, inserts and clinches two rivets at a time . . . with speed that may mean a big saving in your fastening costs. 14" throat makes large assemblies easy to handle. For tubular rivets as large as 9/64", or less in diameter. Quick Change Rotary Type Hoppers and Raceways permit a 5-minute changeover to rivets of different size. Adjustable anvils and riveting centers add to its versatility. Ask us how the "214" can help you cut costs. Send a sample of problem assembly (or blueprint) for Free fastening analysis.

FREE CATALOG contains engineering information, rivet specifications and descriptions of 26 machines.

SEE EXHIBIT NATIONAL METAL CONGRESS, BOOTH 1819, OCT. 20-24, PHILADELPHIA

Chicago Rivet & MACHINE CO.
9606 West Jackson Boulevard, Bellwood (Chicago Suburb) Illinois
Branch Factory: Tyrone, Pa.

▲ For more details circle NED-175 on enclosed inquiry slip ▲

STACKBIN sections will give you a stockroom wherever you want it—quickly and easily as building a sectional book case. These patented sectional storage bins nest together without the use of tools—cost you nothing to build, nothing to move. Find out today how STACKBINS can lower YOUR handling costs.

IMMEDIATE SHIPMENT
Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa
Write Stackbin Corp., 1081 Main St., Pawtucket, R. I.

STACKBIN SYSTEM "Stacked and Still Accessible"

▲ For more details circle NED-176 on enclosed inquiry slip ▲

FOR THE CRANE & HOIST USER . . .

"The WHY and HOW of Faster Production"

If you're searching for new ways to reduce materials handling costs . . . If you want to check your handling operations against installations in *other* plants . . . here's information you'll want! The 16-page booklet "The *WHY* and *HOW* of Faster Production" shows, through photos and sketches, how you can improve crane performance and reduce costs through a unique method of "tailored" crane construction. Mail coupon today.

Get this Information NOW!

READING HOISTS & CRANES
Reading Crane & Hoist Corp.
2105 Adams St., Reading, Pa.

Please send us your free booklet "The *WHY* and *HOW* of Faster Production". I understand there is no obligation.

Name_____ Title_____
Company_____
Address_____
City_____ Zone_____ State_____

▲ For more details circle NED-177 on enclosed inquiry slip ▲

CONSISTENCY METER
checks various viscous materials

Consistency of viscous materials including foodstuffs is measured by this Cenco - Bostwick Consistometer by timing the flow over a measured course. Graduated rectangular Monel trough has spring-actuated gate that is released by trigger. Small compartment at one end is filled with sample to be checked. When the gate is released, sample flows into graduated section or trough, and the distance it travels in one minute is noted. Suggested accessories are stop watch, spatula and thermometer. Made by **Central Scientific Co.**, 1702 Irving Park Rd., Chicago 13, Ill.

▲ For more details circle NED-178 on enclosed inquiry slip ▲

GAGE VISE
for various machine operations

Accurate to within 0.0003-in. on five surfaces, this gage vise provides a means of rigid, accurate clamping for machining operations. One application has shown savings of 2 to 3 hours in original setup time for certain grinding operations. Time savings are also realized in removing work from angle plates and readjustment for subsequent work. Made of hardened and ground tool steel, vise has 2⅝-in. jaw opening. Body dimensions are 2⅜ in. square by 6 in. long. Made by **Erickson Steel Co.**, Erickson Tools Div., 2311 Hamilton Ave., Cleveland 14, O.

▲ For more details circle NED-179 on enclosed inquiry slip ▲

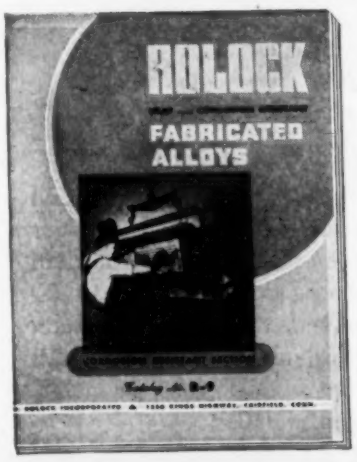
OPTICAL FLATS
in 10-in. and 1-in. diameter sizes

Flatness, size and parallelism of large pieces and of tiny surfaces such as the anvil of a micrometer or ends of precision studs can be checked by these two 10 and 1-in. diameter optical flats. Both are available in the same accuracies. In terms of "deviation from absolute flatness," these include 0.000001, 0.000002 and 0.000005-in. and are maintained the full width of the flat. Made of pure, fused Brazilian quartz, flats can be obtained with one or both surfaces lapped to stated accuracy. Edges are ground and beveled and sides are wrapped in a black band. Made by **DoALL Co.**, 256 N. Laurel Ave., Des Plaines, Ill.

▲ For more details circle NED-180 on enclosed inquiry slip ▲

ROLOCK FABRICATED ALLOYS (HEAT AND CORROSION RESISTANT)

NEW and COMPLETE . . .



specialized reference on Pickling, Degreasing, Galvanizing and other processing operations. Baskets, Manual and Motor-powered Barrels . . . Trunnion, Centrifugal, Bottom-dumping Baskets, Shell Case containers.

• • •

Send for this No. B-9 Corrosion Resistant Section of Rolock's catalog . . . just off the press. It's full of valuable ideas.

Rolock Booth No. 1810 National Metal Exposition October 20-24, 1952, Philadelphia, Pa.

ROLOCK, INC.
1412 KINGS HIGHWAY, FAIRFIELD, CONN.

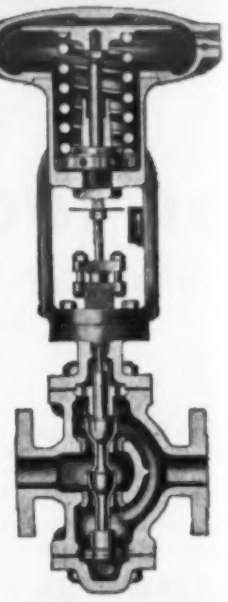
▲ For more details circle NED-181 on enclosed inquiry slip ▲

You've got a Winning Combination

with the New TRADE LESLIE MARK

DOUBLE SEATED DIAPHRAGM CONTROL VALVES

Calling a spade a spade you've got a "royal flush" of features in these new Valves designed for use with control instruments. With these Valves, you get as *standard equipment*, features heretofore only obtainable in expensive, specially designed valves.



Sectional view Class DY Double Seated Diaphragm Control Valve

ESTABLISHED 1900 LESLIE CO. 1765

WRITE FOR Bulletin 513

227 Grant Ave. • Lyndhurst, New Jersey

▲ For more details circle NED-182 on enclosed inquiry slip ▲

ATLAS FILE OF TIME SAVING... MONEY SAVING... EQUIPMENT

SCAFFOLDS

HI-LIFT EXTENSION SCAFFOLDS

Models extend from 6 ft. 8 in. to any desired height. Hand or electrically operated. Comes to you ready for work—no erection required, no loose parts. Built to meet individual requirements. Ideal for Painting, Lighting, Cleaning, and all overhead maintenance. Pays for itself in time and labor saving.

LADDERS

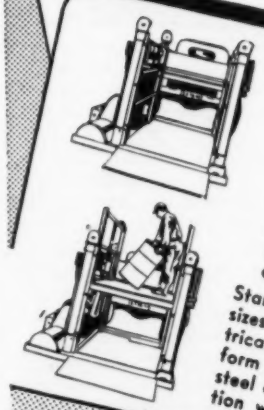
HI-LIFT PORTABLE WORK PLATFORMS

For Overhead Maintenance, Painting, Lighting, Cleaning, etc.
- No Erection Required
- Use at Any Height
- Safe, Sturdy, Dependable
- No Loose Parts
- Easily Rolled . . . Easily Raised

Sturdy, all welded steel construction means absolute safety . . . outrigger brace prevents tilting or rolling. Small enough to pass through doorway, yet raises to 20 ft. Endorsed by leading concerns.

LOADERS

ATLAS ONE-MAN TRUCK LOADERS



"The Portable Loading Platform"
- 1 to 3 ton capacity
- Up to 20 ft. range
- Easily moved on retractable casters

Standard platform 4 ft. x 4 ft.—other sizes to meet your requirements. Electrically operated with either floor or platform control or both. Rugged, all welded steel construction. No strain . . . no exertion with Atlas One-Man Truck Loader.

Write for Complete Information

ATLAS INDUSTRIAL CORP.
853 39th Street, Brooklyn 32, N. Y.

▲ For more details circle NED-183 on enclosed inquiry slip ▲

Oxweld

PORTABLE FLAME-CUTTING MACHINES FILL A VARIETY OF SHOP REQUIREMENTS

This Oxweld CM-16 is designed for oxy-acetylene flame-cutting of steel plate up to 4 inches thick. It travels directly on the work and cuts circles automatically—hand-guided, it cuts irregular shapes. Operated on track this machine cuts straight lines. Adaptors are available for straight-line cutting on thick steel or for beveling. The CM-16 weighs only 45 pounds and is low in price. Write for catalog, Form 4487.

LINDE AIR PRODUCTS COMPANY
A DIVISION OF UNION CARBIDE AND CARBON CORPORATION
30 East 42nd Street UCC New York 17, N. Y.
In Canada: Dominion Oxygen Company, Limited, Toronto

▲ For more details circle NED-184 on enclosed inquiry slip ▲

BETTER SEEING TOOLS FOR INDUSTRY

FOSTORIA LOCALITES INCREASE WORKERS' EFFICIENCY

Light the Vital Seeing Zone on Machine Tools, Inspection and Assembly Benches

MODEL 3267-H-174
Overall length 32¾". Three instantly adjustable joints. Flat oblong base for machine screw mounting.

$6.12 EACH in pkg. of 6 Single Units $7.65 ea.

- **Rugged Construction** withstands vibration and rough handling
- **Instantly Adjustable** with flexible ball and socket joints
- **Baked Enamel Finish** — Exterior, Smooth Gray — Reflector Interior high temperature White
- **Reflector** accommodates 100 watt or any A-19 or A-21 medium screw base lamp
- **Wired Complete** with switch socket and 8 ft. oil resistant cord and moulded plug

WRITE FOR COMPLETE CATALOG of Localite models with various type reflectors, arms and bases for every industrial use.

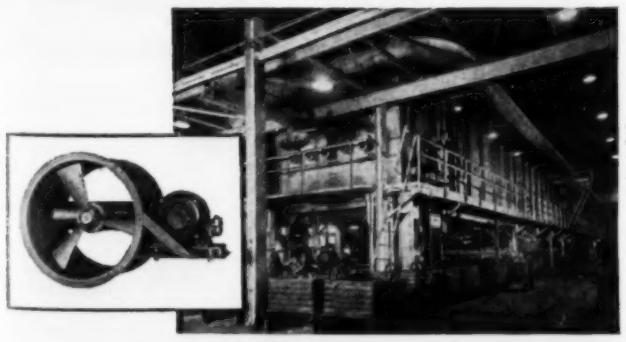
LOCALITE fostoria for Light ON the Job

THE FOSTORIA PRESSED STEEL CORPORATION
FOSTORIA, OHIO

Localites are available through electrical wholesalers everywhere.

▲ For more details circle NED-185 on enclosed inquiry slip ▲

INTERNATIONAL HARVESTER SAYS:
Propellair Fans "Very Satisfactory"



■ Engineers for the McCormick Works of International Harvester in Chicago developed a unique exhaust system with minimum ductwork. It removes 196° combustion products from 222 burners in 8 radiant tube annealing furnaces. 9 Propellair Fans were used with a total CFM of 70,607.

Propellair Belt-Driven Fans were selected because of their record for exhausting explosive fumes with safety and efficiency. These fans have been in operation for 2 years, 24 hours a day, seven days a week.

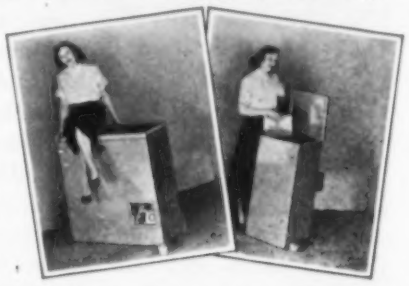
Propellair specializes in industrial fans for specific requirements, consultation available without obligation. Write for Catalog 3082-N.

PROPELLAIR®
DIVISION OF ROBBINS & MYERS, INC.
SPRINGFIELD · OHIO

▲ For more details circle NED-186 on enclosed inquiry slip ▲

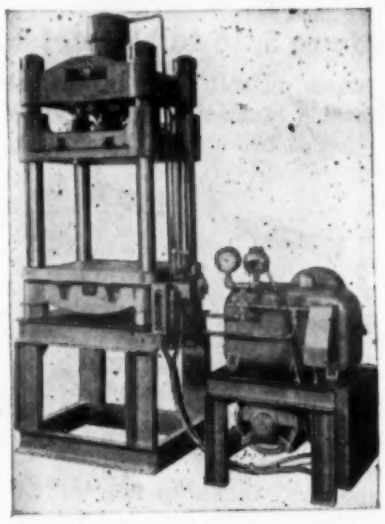
PNEUMATIC SPRAY MASK WASHER uses high pressure jet spray

Operating entirely on air pressure without any electrical connection, these two portable, self-contained spray painting mask washers use high pressure jet-spray that cleans without damaging fine wire bridging. Cleaning cycle is automatic and can be set for any time required by solvent to dissolve the material. At end of cycle, solvent is returned to closed reservoir within washer. Model W-52-H has 33 x 16-in. mask area and 10-gal solvent capacity, while model W-52-V has mask area of 16 x 14 in. and 5-gal capacity. Made by **Sepanski & Associates**, 415 Henry Ave. S. E., Grand Rapids, Mich.



▲ For more details circle NED-187 on enclosed inquiry slip ▲

HYDRAULIC PLATEN PRESSES line includes several types with capacity range from 10 to 500 tons



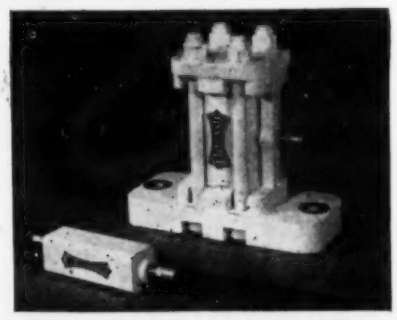
Up-acting, down-acting, 90-degree angle transfer frame and top transfer Blue Ribbon presses with square or rectangular platens comprise this line which includes capacities from 10 to 500 tons. Multiple platens are available for rubber and plastic molding, laminating, metal forming and shaping, die try-out and utility applications.

Also offered are two-speed hydraulic hand pump which develops maximum pressure of 10,000 psi with automatic shift, or two or four cylinder power driven pumps which deliver 2½ and 5½ gpm of oil respectively. For faster approach and return speeds, the power pumps can be furnished with auxiliary pumps or accumulators. Either single lever or automatic controls can be furnished with these presses. Optional design includes single and double acting cylinders which are readily accessible for servicing or replacement.

Power pumps are separate from frame for instant inspection, adjustment or repair. Single pumping unit can be used to operate several presses when similar working conditions exist. Made by **Rodgers Hydraulic, Inc.**, 7461 Walker St., Minneapolis 16, Minn.

▲ For more details circle NED-188 on enclosed inquiry slip ▲

AIR-CUSHIONED VIBRATOR Moves, Settles, Packages Materials QUIETLY.



The CLEVELAND Air-Cushioned Vibrator, latest in its line of quality air vibration equipment, is being used to keep a wide range of materials moving quietly through, into, or out of bins, hoppers, chutes and other material handling devices.

It is compact, carefully engineered and ideally suited for applications where noise is objectionable.

Basically, reciprocating action of the hard chrome-plated piston develops the vibrating action. Momentum set up by the piston is cushioned by an air pocket at each end of the vibrator assembly. This CLEVELAND unit is made in five different piston diameter sizes from 1" to 3".

What are you handling in bins? . . . cinders, powdered soap, candy bars, cement, coal, meat, sand, salt, paint, chemicals, breakfast food? All of these and countless more are flowing, packaging, settling QUIETLY with this CLEVELAND Air-Cushioned Vibrator. Completely eliminates arching, sticking and bridging.

Easily installed. Priced as low as $14.25.

BIN STUCK LATELY? Catalog No. 108 on request.

Made by
CLEVELAND VIBRATOR CO.,
2744 Clinton Avenue, Cleveland 13, Ohio.
ADVT.

▲ For more details circle NED-189 on enclosed inquiry slip ▲

Coiling upward action of
KINNEAR ROLLING DOORS
gives you EXTRA SPACE

Valuable working and storage space is saved by the use of Kinnear Rolling Doors, which open straight upward and coil above the doorway. All floor and wall areas around the door, inside and out, are fully useable at all times.
The rugged, steel slat construction of Kinnear Rolling Doors assures long life protection at lowest operating cost. Push-button, motor-driven operation gives instantaneous action, controllable from one or several locations. Write for complete details.

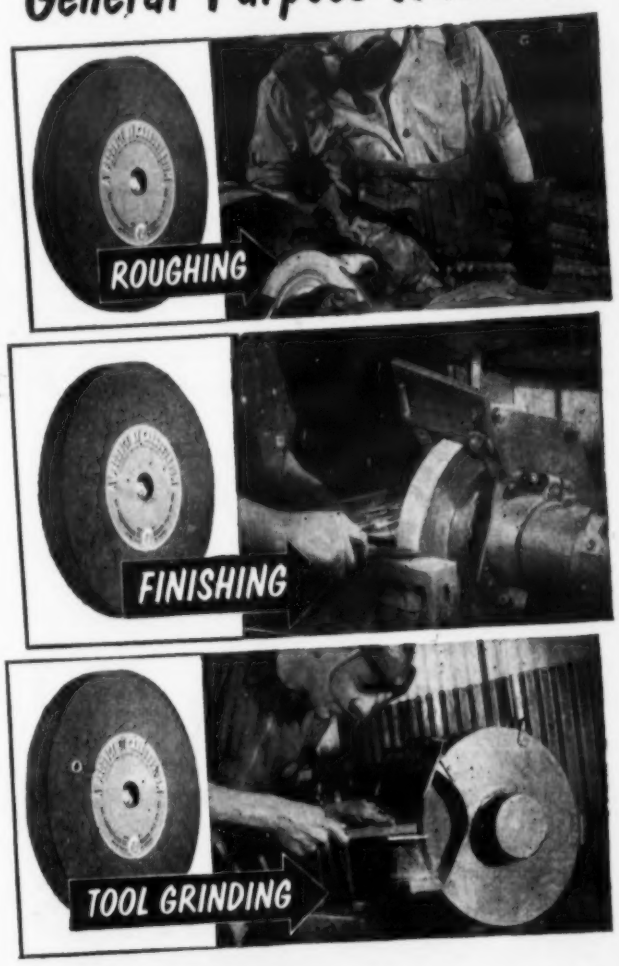
The KINNEAR Manufacturing Company

Saving Ways in Doorways KINNEAR ROLLING DOORS

Factories: 3017 Fields Ave., Columbus 16, Ohio. 1742 Yosemite Ave., San Francisco 24, California
Offices and Agents in Principal Cities

▲ For more details circle NED-190 on enclosed inquiry slip ▲

General Purpose Wheels...



General Purpose Wheels by CARBORUNDUM give you the widest possible range of abrasive tool versatility. Furnished in standard sizes for every known make of grinding machine, they improve the quality and quantity of work from veteran and inexperienced operators alike. In the cool cutting, long lasting V30 bond developed especially for general purpose work, "ALOXITE" aluminum oxide wheels are outstanding performers. They give you the ideal combination of abrasive grain, bond, grade and structure which provide highest grinding performance at lowest total cost.

This "tell-all" booklet is FREE!

ORDER FROM YOUR CARBORUNDUM DISTRIBUTOR TODAY. He's your best bet for complete stocks, prompt delivery, experienced counsel on latest developments in the field. You'll find him listed in the yellow pages under "Abrasives." Phone him today—it's to your profit!

THE CARBORUNDUM COMPANY, Dept. NED 81-81
Niagara Falls, New York
Please send me, FREE, your booklet, "Causes and Corrections of Common Grinding Errors."

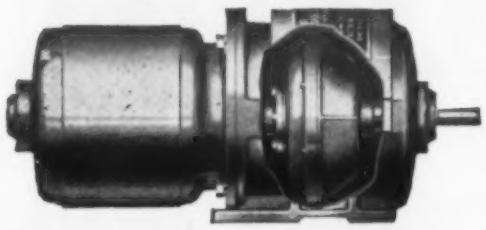
NAME AND TITLE
COMPANY
STREET AND NUMBER
CITY ZONE STATE

Only CARBORUNDUM
TRADE MARK
offers ALL abrasive products...to give you the proper ONE

"Carborundum" and "Aloxite" are registered trademarks which indicate manufacture by The Carborundum Company, Niagara Falls, New York.

▲ For more details circle NED-191 on enclosed inquiry slip ▲

American Blower TM Type GYROL FLUID DRIVES



MECHANICAL ADVANTAGES:

- Provides smooth flow of power. Shocks are absorbed in a cushion of oil. There's no metal-to-metal contact between driving and driven machinery.
- Offers by its inherent shearpin action, selective overload protection for both motor and driven machinery. Decreases machine "down" time.
- Available as a complete packaged unit suitable for either direct or belt connection to the driven machine. Minimizes alignment problems.

Free trial units are available to original equipment manufacturers.

AMERICAN BLOWER

American Blower Corporation, Detroit 32, Michigan

Division of American Radiator & Standard Sanitary Corporation

Serving home and industry: AMERICAN-STANDARD • AMERICAN BLOWER • ACME CABINETS CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILERS • ROSS HEATER • TONAWANDA IRON

For more details circle NED-193 on enclosed inquiry slip

Industrial Fabrics

Cottons, Nylons and other Synthetics

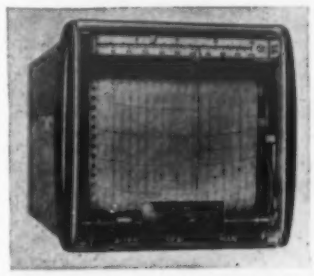
MADE TO GOVERNMENT SPECIFICATIONS

Reeves offers a wide range of fabrics adaptable to many industrial uses. If your industry has problems involving the use of fabrics, Reeves can help you solve them. Write or call now.

REEVES BROTHERS INC.
W. Harris Thurston Division
54 Worth Street, New York 13, N. Y.

For more details circle NED-194 on enclosed inquiry slip

PANEL INSTRUMENTS
line consists of four types for various combinations



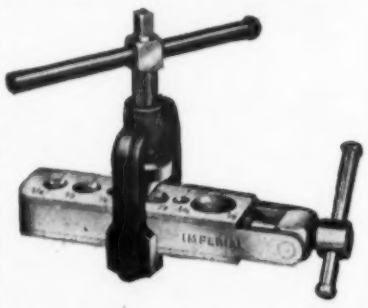
Consotrol line of compact indicators, recorders and controllers consists of models 52, 53, 58 and 59, which can be used in a variety of combinations, depending on application requirements. Use is in graphic panels and instrument consoles. Model 52 controller has a 4-in. indicating scale and continuous valve position indicator. It occupies 3½ x 6½ in. of panel space.

Model 53 recorder uses a 4-in. strip chart to provide a 30-day process record on a single roll. Five hours of chart is visible at one time. Overall panel size is 6 x 6 in. Model 58 controller uses "floating disk" force-balance system for adjusting proportional band from zero to infinity. Reset time is adjustable over a 1000:1 range. Model 59 controller is mounted direct on the valve motor to control liquid flow. Made by **Foxboro Co.**, 26 Neponset Ave., Foxboro, Mass.

For more details circle NED-195 on enclosed inquiry slip

TUBE FLARING TOOLS
two models flare 3/16 to 1¼-in. tube

Thirty-seven degree flares on soft steel, copper, aluminum and fully annealed stainless steel tubing can be made with either one of two compact, lightweight flaring tools. Model 437-F flares 3/16, ¼, 5/16, ⅜, ½ and ⅝-in. OD tubing while model 537-F with rollers in the flaring cone handles ¾, ⅞, 1 and 1¼-in. OD sizes. Latter model also embodies automatic burnishing mechanism to give polished finish to face of flare. Tools consist of heat treated sliding dies to grip tubing, a single lever at end of die holder for clamping tubing in place and yoke which slides directly over end of die holder into position over tubing to be flared. Made by **Imperial Brass Mfg. Co.**, 510 S. Racine Ave., Chicago 7, Ill.



For more details circle NED-196 on enclosed inquiry slip

DO YOU KNOW? Plain washing machines assume a role of semiautomaticity when they are hooked up to a new Tork washing machine timer. This device plugs into electric outlet and washing machine is plugged into timer. Telechron motor driven, device shuts off the washing machine at any preselected time. Made by Tork Clock Co., Dept. NED, 1 Grove St., Mt. Vernon, N. Y.

For more details circle NED-197 on enclosed inquiry slip

The new Slotted-Type "Place" Bolt as made by "CLEVELAND"

(Licensed under U. S. Patent No. 2543705)

Economical in cost and use, Place Bolts have broad application possibilities in vibration point assembly. One piece, self-locking. Tough cold-forged strength. Re-usable. Write for folder on "Cleveland" Place Bolts.

CLEVELAND *Top Quality* **FASTENERS**
The Cleveland Cap Screw Company
2917 East 79th Street Cleveland 4, Ohio

For more details circle NED-198 on enclosed inquiry slip

Drill Hardened Steels without Annealing—

With the new, improved "HARDSTEEL" Drill, you can do accurate, smooth drilling, countersinking, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon—high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce rejects. They permit engineering changes requiring additional drilling after hardening. And parts drilled after hardening always match at assembly.

Write for a copy of the "HARDSTEEL" Operators Manual showing how "HARDSTEEL" drills are cutting costs in thousands of plants.

You Harden It—We'll Drill It—With "HARDSTEEL"

BLACK DRILL COMPANY, INC.
1380 East 222nd St. • Cleveland 17, Ohio

Also makers of— BLACK DRILLING UNITS—AUTOMATIC, SELF-CONTAINED—FOR COST-CUTTING PRODUCTION ON ALL MATERIALS *Write for information*

For more details circle NED-199 on enclosed inquiry slip

Need a building? Or a series of them? Quickly, and at low cost?

Truscon SPEED-ERECT Steel Buildings can be arranged to fit exactly your requirements of design and budget. Truscon Steel Buildings are available in a wide range of standard designs. They are used for all kinds of industrial and commercial buildings because they offer fire protection, permanence, ease and speed of erection, low upkeep, low cost, high investment value. Truscon Steel Buildings have a high salvage value which permits them to be dismantled and re-erected in an entirely new location at modest expense.

Write and tell us your building requirements.

FREE BOOK—Plan your building needs with the aid of the fully illustrated, 24 page catalog giving full details on these Truscon Ready-Made Steel Buildings. Write for your free copy today.

TRUSCON STEEL COMPANY 1096 Albert St. Youngstown 1, Ohio
Subsidiary of Republic Steel Corporation

For more details circle NED-200 on enclosed inquiry slip

feature for feature...
THIS NEW SQUARE D VOLTAGE TESTER
Tops them ALL!

for further details, write Square D Company, 6060 Rivard Street, Detroit 11, Michigan

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

For more details circle NED-201 on enclosed inquiry slip

there's a way around this

IRON CURTAIN

Don't put up with business blockades caused by overloaded or obsolete internal communications. AMPLICALL Electronic Intercommunication takes down the "Iron Curtains" in *your* business—provides *2-second speech contact* within and between departments—leaves switchboards clear for important outside calls—keeps personnel *on the job*—gets business done faster! Today, more than ever, your business needs AMPLICALL—the superior Intercommunication System.

ELECTRONIC **AMPLICALL** INTERCOMMUNICATION

See Your Phone Book

For your nearest AMPLICALL specialist, look under "Intercommunication" in your classified 'phone directory, or write direct.

Electroneering is our business

SOUND EQUIPMENT **Rauland** INTER-COMMUNICATION

RAULAND-BORG CORPORATION • 3523-D ADDISON ST., CHICAGO 18, ILL.

▲ For more details circle NED-202 on enclosed inquiry slip ▲

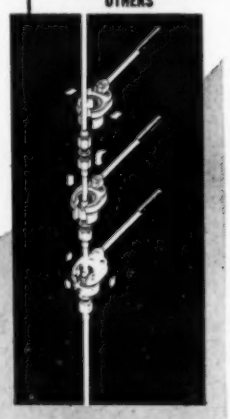
Volume-manufactured in two styles—the socket type and the Crowfoot type, TAC Open End Ratchet Wrenches are scoring phenomenal time and labor savings throughout all Industry.

It is a matter of record that heretofore no tool was made that could — *in a limit of 7° ratcheting arc* — successfully tighten or back off nuts or fittings on tubing or other standing center assemblies. The speed with which TAC can complete difficult wrenching jobs, in anybody's hands, is amazing.

Our plants are currently producing at capacity for all the Armed Forces and for Defense industries.

For Phenomenal Speed in These Wrenching Jobs

ELECTRICAL CONDUIT
HYDRAULIC LINES
LUBRICATION LINES
ENGINE FUEL LINES
PNEUMATIC LINES
REFRIGERATION
AIRCRAFT
RAILROAD EQUIPMENT
RIGGING EQUIPMENT
REFINERY EQUIPMENT
CHEMICAL LINES
AUTOMOTIVE EQUIPMENT
WATER AND GAS LINES
...AND DOZENS OF OTHERS



© 1952—TAC

TAC

TUBING APPLIANCE COMPANY
10321 ANZA AVENUE
Los Angeles, California

For information about TAC Wrenches see your Industrial Supply Distributor.

▲ For more details circle NED-203 on enclosed inquiry slip ▲

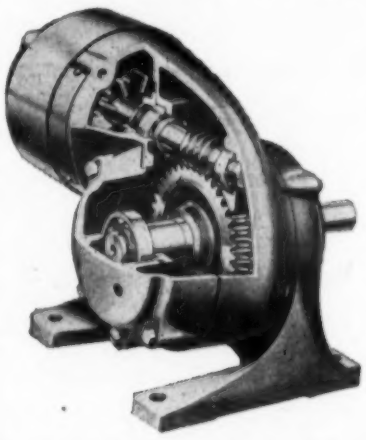
TAPPING CHUCK for operation at high speeds

Small and light in weight, the 000 Cone Drive tapping chuck is designed for high speed operation. Featuring interchangeability of shanks, it has an oil-resistant celeron cone and needle bearings at top and bottom of the main spindle. Chuck is very sensitive with minimum play between drive and reverse. Offered with collet chuck or Jacobs Rubber Flex tap chuck, tool is supplied in three sizes: 000 for 0 to No. 10 taps; 00 for 1/8 to 1/4-in. taps; and 0 for No. 10 to 1/2-in. taps. Made by **Errington Mechanical Laboratory, Inc.,** 26 Norwood St., Staten Island 4, N. Y.

▲ For more details circle NED-204 on enclosed inquiry slip ▲

WORM-GEAR MOTOR of right angle, low speed type

Cantilever design to protect gear alignment is incorporated in line of low speed right angle worm-gear motors identified as type GW Syncrogear. Gear and motor housing are free from distortion. Unit has splash lubrication, hardened and ground worm, asbestos protected windings and self-locking brake action. Speed ranges from 20 to 155 rpm, gear ratios up to 58:1 and horsepower ranges from 1/4 to 3 are available. Unit can be installed horizontally or upright. Modifications include footless flange mounting, variable speed, splashproof design and total enclosure. Made by **U. S. Electrical Motors Inc.,** Dept. NED, P. O. Box 2058, Los Angeles 54, Calif.



▲ For more details circle NED-205 on enclosed inquiry slip ▲

DO YOU KNOW? Accuracy hitherto unobtainable in measuring thickness of homogeneous materials such as metals, glass, plastics and other dense substances is possible with the Audigage Ultransonic Micrometer. It can be powered by its own batteries or plugged into the nearest electric outlet. Range of thickness that can be measured is 0.01 to 12 in. Made by Branson Instruments, Inc., Dept. A, 430 Fairfield Ave., Stamford, Conn.

▲ For more details circle NED-206 on enclosed inquiry slip ▲

DYNAPRENE

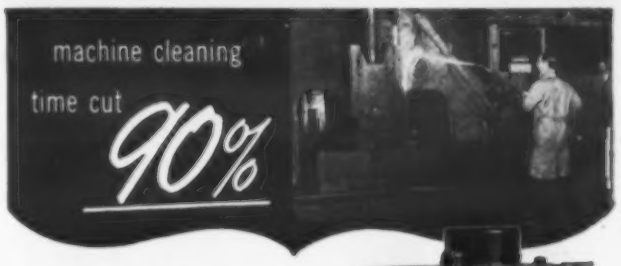
Flexible Cord

DYNAPRENE is better because it lasts longer. It is made of an exceptionally tough neoprene compound developed after extensive research and experience. It is made by the continuous vulcanizing process that guarantees accurate centering and even cure, eliminating thin, weak spots. DYNAPRENE is a truly modern cord made to withstand the rigors of constant use yet is priced only slightly higher than other types of cord that need frequent replacement.

Be sure to specify Whitney Blake type SO, SJO or SV-type neoprene jacket for your cord requirements.

WHITNEY BLAKE CO.
WELL BUILT WIRES SINCE 1899
NEW HAVEN 14, CONNECTICUT

▲ For more details circle NED-207 on enclosed inquiry slip ▲



Production increased . . . accidents decreased with

HYPRESSURE **Jenny** steam cleaner

Here are actual savings reported by four prominent manufacturers* who switched from hand cleaning to *Hypressure Jenny Steam Cleaning.*

MACHINE	Hand Cleaning	Hypressure Jenny Steam Cleaning	Man-Hours Saved
40 Ton Toggle Press	64 hrs.	3 hrs.	61 hrs.
72" Calender Machine	48 hrs.	5 hrs.	43 hrs.
Auto. Screw Machine	49 hrs.	5 hrs.	44 hrs.

*Names on request.

And keep in mind that they represent economies in actual cleaning time only. Additional savings of up to 40% in repair costs, less "down-time" for production machinery, and fewer lost-time accidents, invariably result when machinery, tools, equipment and floors are kept clean and free of dangerous, speed-retarding dirt and grease.
Complete details are yours for the asking. Write today.

HYPRESSURE JENNY DIVISION
HOMESTEAD VALVE MANUFACTURING CO.
Serving since 1832
P. O. BOX 84 CORAOPOLIS, PA.

▲ For more details circle NED-208 on enclosed inquiry slip ▲

9800 American industrial leaders depend on Kroil when a frozen bearing, bushing or bolt threatens production or starts to cost expensive man hours.

During eleven years they have learned that it pays to use Kroil first and save parts. In these days of critical materials, shops cannot afford to use hammer-and-chisel methods when stuck-together parts cause trouble.

What Users Say!

"Five men using levers and sledges worked for an hour with a frozen shaft . . . one man used Kroil and lifted the shaft out with no leverage" . . . "Before trying Kroil we broke off every nut (on our heat treat quench trolleys) . . . since then we have not lost one and have decreased the repairing time from 30 minutes to about six minutes per trolley."

Try Kroil at our risk. Send for a gallon—use it under the worst conditions you have. Return it for full credit if not satisfied. Kroil, $3.50 a gallon; Kroiler, $1.50 each . . . together, $4.75, f. o. b. Nashville.

KANO LABORATORIES
1074 Thompson Lane, Nashville 11, Tenn.

▲ For more details circle NED-209 on enclosed inquiry slip ▲

Found!

A FLOOR THAT TAKES THE POUND...POUND...POUND!

PABCO MASTIPAVE

AMERICA'S NO. 1 LOW-COST LONG-LIFE FLOOR COVERING

"After years of using Pabco Mastipave throughout our large production plant on cement and wood floors, we have found it to be a most practical floor covering for heavy duty usage," says Bruce E. Merritt, Purchasing Agent, Charles R. Hadley Company, printers and publishers.

"We have greatly decreased accident hazards by placing Mastipave on stairways. Mastipave withstands heavy trucking, and is easy to maintain."

SEND NOW FOR THE FULL STORY OF MASTIPAVE!

PABCO PRODUCTS INC.
New York 16 • Chicago 54 • San Francisco 19
(Mail to Dept. L, nearest office)
GENTLEMEN: Without cost or obligation to me, please send folder, "Every Building Needs Pabco Mastipave."
NAME_____
ADDRESS_____
CITY_____ STATE_____

▲ For more details circle NED-210 on enclosed inquiry slip ▲

SIZE 6 and SIZE 7 SOLENOID STARTERS

- Silver Alloy Contacts
- Simple, Rugged Construction
- Steel Panel Mounting
- Front of Panel Wiring

Now—all the advantages of SOLENOID design in the NEW Allen-Bradley BULLETIN 709 SIZE 6 and SIZE 7 STARTERS. Allen-Bradley Bulletin 709 Size 6 and Size 7 solenoid starters possess all the features that have proved so successful in smaller Allen-Bradley starters. Write, today, for information. Allen-Bradley Co., 1334 South Second Street, Milwaukee 4, Wisconsin.

ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

For more details circle NED-211 on enclosed inquiry slip

AUTOMATIC GAS TORCH
lights with trigger squeeze and provides up to 2800° F heat

Pistol-shaped Torch-O-Matic automatic acetylene-air torch lights at squeeze of trigger and shuts off on release. This versatile tool is adaptable for loosening frozen nuts and bolts, setting anchor bolts, removing shrink-fit collars and bushings, heating branding stencils, safe-ending wire-strand cable and rebabbitting bearings as well as maintenance or production work requiring soldering or brazing.

Tool weighs only 12 oz, has combination trigger-operated lighter and control valve, and provides instantaneous heat up to 2800° F. Three sizes of combustion tubes, 1/8, 3/16 and 1/4-in., adapt torch for variety of jobs from small precision work to heavy soldering or heating. Accessories include pressure regulator, tank and operating pressure gages, hose and hose clamps, lighting flints, combustion tubes and nozzles, and extension tips. Made by **Velocity Power Tool Co.**, 7500 Thomas Blvd., Pittsburgh 8, Pa.

For more details circle NED-213 on enclosed inquiry slip

PLASTIC TOTE BOX
replaces 10 different sized boxes

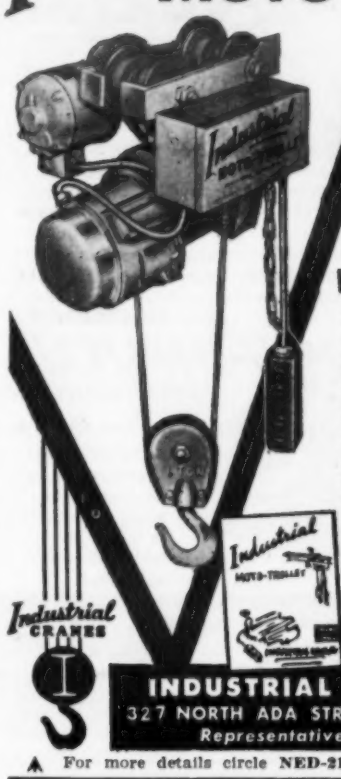
Measuring 24 x 19 x 7 in., this single plastic tote box takes the place of ten different sized wooden tote boxes used to accommodate ten gun stock designs. Box holds stocks snugly in rocker grooves molded to their contours, eliminating need for lining. Container is cheaper to make as mold cost per unit is reduced because of standardized design. Box has a life expectancy of 8 to 12 years and can be nested or stacked at right angles to each other. Royalite styrene copolymer is used in construction as it wears well, absorbs little water and resists lubricating oils and other chemicals. Made by **Bassons Industries Corp.**, Dept. N, 1432 W. Farms Rd., Bronx 60, N. Y.

For more details circle NED-214 on enclosed inquiry slip

DO YOU KNOW? Precision castings produced by latest shell molding process are now being made to customer's requirements by this company. Casting line will be marketed under the name "Die Mold Castings." Service is offered by Powdered Metal Products Corp. of America, Franklin Park, Ill.

For more details circle NED-215 on enclosed inquiry slip

Industrial MOTO-TROLLEY



MAY BE ATTACHED TO YOUR STANDARD ELECTRIC HOIST . . .

ADJUSTABLE TO ACCOMMODATE WIDE VARIETY OF BEAM SIZES

- Crown-tread machine steel wheels with hardened drivers.
- Each wheel equipped with double-row precision ball bearings and removable-head axle with Alemite grease fittings.
- Powered by a crane-duty high-torque totally enclosed motor of 30 minute 55 degree rating.
- Magnetic contact panel has transformer to reduce voltage in single speed push button control circuit.
- 4-button control station operates single speed trolley and hoist motions.

Write for Literature

INDUSTRIAL EQUIPMENT CO.
327 NORTH ADA STREET CHICAGO 7, ILLINOIS
Representatives in Principal Cities.

For more details circle NED-217 on enclosed inquiry slip

MYSTIK® BRAND TAPES · SELF-STIK

New!

MYSTIK® BRAND

Corner Protectors!

These rubberized fiber Corner Protectors attach by their own adhesive to corners of metal sheets. Protect corners from damage. Prevent corners from scratching other surfaces or causing personal injuries. Save countless dollars of refinishing and replacement on finished work. Easy to attach. Stay on sheets during storage, transfer, fabrication. Write for information and free samples. Mystik Adhesive Products, 2657 N. Kildare, Chicago 39.

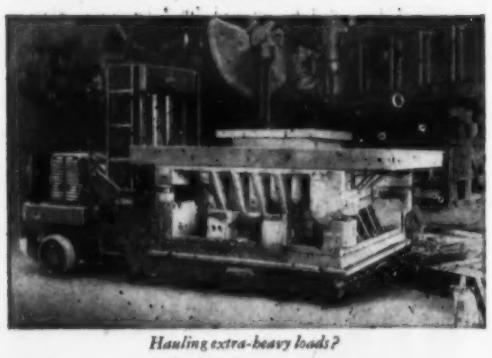
Trademark Mystik Registered

© Mystik Adhesive Products, 1952

For more details circle NED-218 on enclosed inquiry slip

B.F.Goodrich

Waste disposal?



Hauling extra-heavy loads?

Where do you use industrial tires?

Here's how TW TIRE AND WHEEL ANALYSIS can cut your costs

● We have a plan that is saving up to 50% on tire and wheel costs for industrial tire users. It's called the Tire & Wheel Analysis Plan. It's applicable no matter what your usage of industrial tires. On request and without charge, a man who knows industrial tire problems looks over your operations, analyzes your particular needs. Then he makes maintenance and service recommendations. He also recommends the exact type, size, tread design and tread compound which best suits *your* operations. He shows you how to save through retreading. Remember his recommendations are impartial because B. F. Goodrich makes *all* types and kinds of industrial tires. The BFG man has no axe to grind for just one or two particular types. He has them all.

See your nearby B. F. Goodrich Dealer for your immediate industrial tire needs. For additional information on the B. F. Goodrich Tire & Wheel Analysis Plan, use the attached coupon. A similar plan is available for manufacturers of industrial hauling equipment.

The B. F. Goodrich Co.
Department TW-205
Akron, Ohio

Please give me additional information on your new Tire and Wheel Analysis plan.

Name_____
Title_____
Company_____
City_____ State_____

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

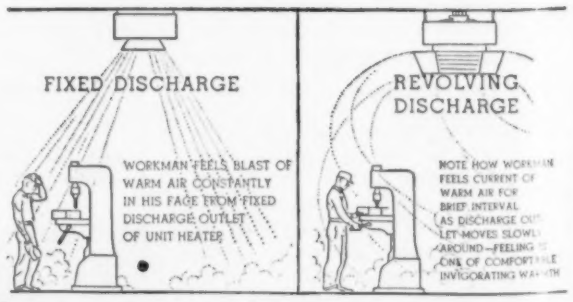
For more details circle NED-212 on enclosed inquiry slip

A MIRACLE? No—merely common sense. Just clamp a SERVIS RECORDER on each of your present machines. That little "watch dog" of your production schedules will act as a time clock for your machinery, recording on its chart *ALL* stops and delays, day and night. (Even down to 10-minute periods.) Thus when you can *see* it all right before your eyes, you can plan to eliminate that *down time* and thereby increase production. It's all that simple. Write today for our folder—"A BUSY PLANT." The Service Recorder Co., 1375 Euclid Ave., Cleveland 15, Ohio.

The Servis Recorder
The "Time Clock" for Machinery

For more details circle NED-216 on enclosed inquiry slip

Why revolving heaters can solve YOUR heating problems



WING REVOLVING UNIT HEATERS are successfully solving the heating problems of thousands of industrial plants today because they assure a uniform comfortable temperature throughout, with no hot blasts, no cold spots, no chilly corners. Instead of annoying hot blasts, the worker is conscious only of a pleasing sensation of fresh, live, invigorating warmth . . . and in Summer with the steam turned off, these revolving "heaters" become an equally effective cooling system. Write for Bulletin HR-6.

L. J. Wing Mfg. Co. 165 Vreeland Mills Road Linden, New Jersey

For more details circle NED-219 on enclosed inquiry slip

EVERY ENGINEER will want a copy of this BULLETIN

SEND FOR BULLETIN 110

● It's easy to get the right cylinder for even the most special jobs when you use Hannifin's big hand-book on HYDRAULIC CYLINDERS. 52 pages of helpful specification and engineering data, complete with diagrams and dimensions. The Hannifin line is complete! 12 standard bore diameters, 1" to 8"... any length stroke you specify ... 11 standard mounting styles ... standard, double end or heavy duty (2:1) piston rods ... available with adjustable cushions ... pressures to 1500 lbs. per sq. in. Send for Bulletin 110. Hannifin also builds custom cylinders in any quantity to special designs. *Bring us your cylinder problems!*

HANNIFIN

1127 S. Kilbourn Ave., Chicago 24, Ill.

▲ For more details circle NED-220 on enclosed inquiry slip ▲

READ AIR VELOCITIES *instantly... accurately... anywhere...*

...WITH THE

ALNOR VELOMETER

Alnor Velometer, a precision-built, self-contained, portable instrument, gives you instant, *accurate* readings of air velocities anywhere—in plants, mines, mills or laboratories. Measures speed of air flow through ducts, grilles, furnaces, spray booths or in the open. This rugged instrument needs no special care or delicate handling—anyone can use it and get accurate readings. Needs no calculations or reference charts. Available in a wide variety of scale ranges, and with a full assortment of jets and fittings for every application. You'll want full details and prices, so write for Bulletin 2448-G, Illinois Testing Laboratories, Inc., Room 529, 420 No. La Salle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ For more details circle NED-221 on enclosed inquiry slip ▲

FOR VENTILATION, FUME AND DUST CONTROL AIR CONDITIONING

Light, Strong, Flexible

FLEXAUST

SPIRAL-REINFORCED HOSE

Flexaust is suitable for a wide variety of suction and pressure uses in ventilation, dust collection and fume control. **SIZES 1¼ inches to 24 inches.** Write for full information on this all-purpose hose. Various Flexaust types, accessories, and other hose types also available:

BLOFLEX *Non-reinforced collapsible*

PORTOVENT *Ring-reinforced retractable*

AMERICAN VENTILATING HOSE COMPANY

Dept. N-9, 100 Park Avenue, New York 17, N. Y.

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PNEUMATIC RIVETER for fragile work with slender rivets

Precise jobs involving fragile materials or slender, unsupported rivets are possible on this semiautomatic Airflex pneumatic riveter incorporating spindle designed to minimize impact noise. Air timing valve can be set for impact duration from 5/10-second to any time length. Blow force can be regulated from 5 to 80 psi at hammer speeds ranging from 6000 to 16,000 strokes per minute. As peen rotates, only small cross-sectional area of rivet head receives blow to assure good fastening. Floor and bench type vertical models, as well as double-end units for simultaneous heading of both ends of rivet are available. Manually operated units in wide size and capacity ranges are also furnished. Made by **Lemert Engineering Co.**, Plymouth, Ind.

▲ For more details circle NED-223 on enclosed inquiry slip ▲

HEATER SWITCHES can be line or cluster mounted

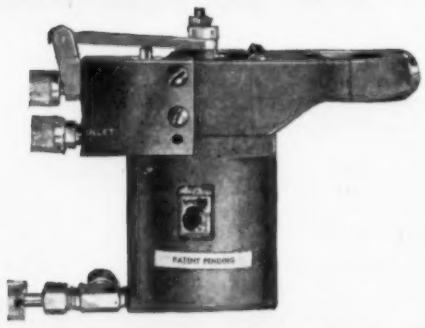
Connection of Diamond H series 850 heater switches is accomplished by pushing stripped end of standard wire, either solid or stranded, into one of switch's auto lock connections. Spring clamp automatically locks wire in place with positive connection. For rewiring, immediate release is obtained by depressing small lever. Switches can be close mounted in line or cluster arrangements to save space and simplify assembly work. They are UL approved and are available in standard, heavy and horsepower ratings in a variety of standard and special circuits. These include off-on, three, five, seven and nine-heat circuits with one-hole, two-hole or special mounting arrangements. Made by **Hart Mfg. Co.**, Dept. N, 110 Bartholomew Ave., Hartford, Conn.

▲ For more details circle NED-224 on enclosed inquiry slip ▲

DO YOU KNOW? Solutions to complex problems in dynamics can be supplied to industrial and research organizations on a fee basis. Problems will be accepted for analysis and solution whether or not they involve the use of an analog computer. Service is offered by Computer Corp. of America, 149 Church St., New York 7, N. Y.

▲ For more details circle NED-225 on enclosed inquiry slip ▲

DOUBLE YOUR DRILL PRESS OUTPUT FOR $33

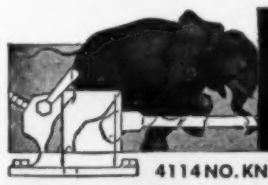


USE A NEW MEAD PNEUMATIC DRILL PRESS FEED FOR DRILLING REAMING TAPPING

This simple, inexpensive device quickly converts standard drill presses into semi-automatic machines — increases production substantially on suitable jobs: double or more in some cases.

Clamps to spindle quill in a few seconds. Automatically closes air fixture on work. Adjustable feed control and break-through cushion. Quick return. Easy to synchronize with automatic cycle equipment.

Air-Power does it quicker, cleaner, better. Write today for latest complete catalog.



MEAD SPECIALTIES COMPANY

4114 NO. KNOX AVE., DEPT. N-92-A, CHICAGO 41, ILL.

▲ For more details circle NED-226 on enclosed inquiry slip ▲

want FREE ADVICE that'll save you money?

Your Cambridge Field Engineer can show you how woven wire conveyor belts combine movement with processing to reduce costs, boost output.

This typical Cambridge belt installation moves galvanized sheet from the pot through cooling and finishing.

Whatever the size or type of product you process ... regardless of hot, cold or corrosive processing ... the correct Cambridge Woven Wire Conveyor Belt installation to combine movement with processing means less manual handling, lower handling costs, faster, more uniform production.

Cambridge wire belts can be woven from any metal or alloy ... including corrosion-resistant alloys ... to any mesh or weave. If needed, we can provide special side or surface attachments to hold the parts during up or down movement. In processing involving liquids ... quenching, painting, pickling, etc. ... open mesh of the belt permits free drainage of process solutions. Where heat or gas atmospheres are used, open mesh permits free, uniform circulation of the process media.

It costs you nothing to get the experienced advice of your Cambridge representative. Why not call him in soon. See "Belting-Mechanical" in your classified telephone directory or write direct for the name of our man who serves your area.

130 Page Illustrated Catalog—**FREE!** Gives Cambridge belt design and conveyor construction, also complete belt specifications and metallurgical data. Write today.

The Cambridge Wire Cloth Co.

WIRE CLOTH · METAL CONVEYOR BELTS · SPECIAL METAL FABRICATIONS

Department C
Cambridge 9, Md.

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

▲ For more details circle NED-227 on enclosed inquiry slip ▲

where ELSE can you use PRINT-AD STRING

Reg. U. S. Pat. Off.

the "TIE that TALKS"?

Tie up your products with Print-Ad String, and wherever they go they tell people your name or slogan, they give directions, they measure footage, they provide grade markings—they tell whatever you want told . . and tell it in a novel, colorful way.

Here's a tremendously strong COTTON tie—in thicknesses down to .003, widths down to ⅛", in any color or combination of colors you want—a tie that won't mar or dent the edges of articles tied in it—won't slip in the knot—won't stretch—and adds a smart touch to your package.

Mighty useful for manufacturing short-cuts, too. Be informed! Mail coupon now for FREE booklet full of valuable ideas!

BETTER TYING

Holds parts firmly for assembly, cutting, drilling . . Holds parts in finished assemblies . . Measures running footage . . Gives directions, grade marks, identifications.

BIG HELP IN THE PLANT

Good-looking all-cotton ties! . . Flat, won't mar or dent edges of boxes or merchandise . . Won't slip in the knot . . Non-stretch, great strength . . Also used as rip-cord opener, from candy bars to survival kits . . Ties anything!

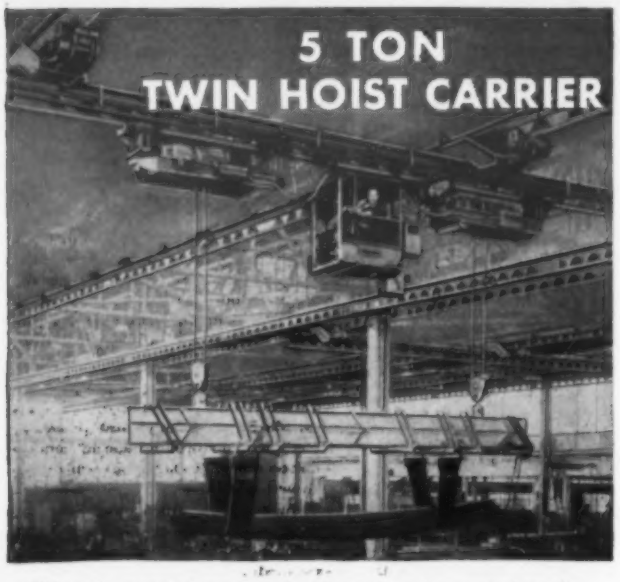
MAIL FOR FREE IDEA BOOK!

Dept. C - Chicago Printed String Co.
2300 Logan Blvd., Chicago 47, Ill.

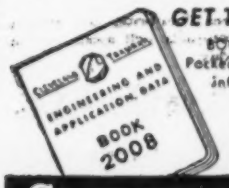
GENTLEMEN: Without cost or obligation send me your **FREE** Idea Book.

My Name _____
Title _____
Company _____
Address _____
City _____ State _____

▲ For more details circle NED-228 on enclosed inquiry slip ▲



This cab-operated carrier operates on two 4-runway transfer bridges, providing full handling coverage for an area 152' x 380'. It handles 5 tons of tubing up to 40 feet long.



GET THIS BOOK! BOOK No. 2008 Packed with valuable information... For any handling problem — simple or extensive — check with Cleveland Tramrail.

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6603 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

For more details circle NED-229 on enclosed inquiry slip

CAMCAR

COLD-FLOWS

6-DIGIT AN BOLTS

ENGINE BOLTS

to highest degree of Tolerances, Tensile Strength, Quality—in High Heat-Resisting Alloys!

MOST CRITICAL BOLT APPLICATION IN JET-POWER PROGRAM

Sources for Jet-program requirements of this calibre are selected by *proven performance.* Camcar has the distinction of being a major source chosen for high-volume supply to principal Jet Engine Manufacturers.

Camcar's Cold-Flow techniques and tooling abilities make it possible to meet such rigid requirements of quality, close tolerances and tensile strength — *consistently.*

AEB identification on each piece assures you of Camcar quality.

Telephone 5-9451 / *Teletype* RK-5653

CAMCAR SCREW & MFG. CORP.
601 EIGHTEENTH AVE., ROCKFORD, ILL.

"PRODUCTION-DESIGNED FOR YOUR ASSEMBLY LINE"

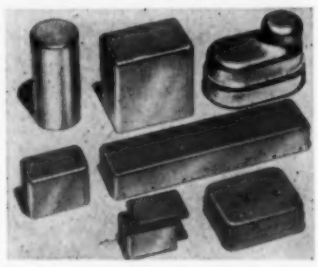
For more details circle NED-230 on enclosed inquiry slip

HIGH SPEED REFRACTOMETER
accurate to plus or minus 0.0001-in.

Seven specific ranges are tailor-made into the high speed industrial refractometer for production line use in petroleum, plastics and other industries. Accurate to plus or minus 0.0001-in., instrument needs no adjustments, has no moving parts and makes most analyses in 10 to 15 seconds. According to scale selected by the user, instrument gives readings in terms of refractive index, percentage of dissolved solids or Butyro number. Use is by placing a normal amount of specimen on the top-loading horizontal prism and looking into a single eyepiece. Color compensator gives a sharp dividing line on the fixed eyepiece scale. Temperature control chamber allows stable heating of prism assembly. Made by **Bausch & Lomb Optical Co.,** 727 St. Paul St., Rochester 2, N. Y.

For more details circle NED-231 on enclosed inquiry slip

DRAWN ALUMINUM BOXES
in more than 150 standard sizes



Seamless, deep drawn aluminum boxes in more than 150 standard sizes for wide variety of uses are now available and can be furnished complete with fasteners installed, holes punched and brackets mounted as required. Boxes, which can also be fabricated to specifications, are practical as electronic and radar chassis parts, instrument dial and gage boxes, precision junction and coil boxes and cases for various electrical parts. For extremely high finish free from tool marks and other defects, boxes can be made by special process which uses drawing lubricant that eliminates metal to metal contact during drawing operation. Made by **Zero Mfg. Co.,** Dept. 250, 1121 Chestnut St., Burbank, Calif.

For more details circle NED-232 on enclosed inquiry slip

DO YOU KNOW? This may be just what you need. There's a new "giant brain" or electronic computer that has a controlled memory capacity of 102,400 nine-digit "words" and can solve a ten-digit mathematical problem in 3 milliseconds, if you're in a hurry. It can save countless hours of time in computing solutions to complex technical problems. The price? Just $62,500. Developed by Electronic Computer Corp., 160 Avenue of the Americas, New York 13, N. Y.

For more details circle NED-233 on enclosed inquiry slip

EVERY STEP A SAFE STEP WITH BLAW-KNOX GRATING

Everyone walks safely, confidently on Blaw-Knox Electroforged Steel Grating . . . the one-piece panels stay rigid and strong—without shimmy or shake—because there are no parts to work loose. Twisted cross bars provide sure footing under the most adverse conditions. For complete information, write for Bulletin 2365.

BLAW-KNOX GRATING
Industry's first choice for
• SAFETY • STRENGTH • LONG LIFE
• LOW UPKEEP • SELF-CLEANING

Grating Department
BLAW-KNOX DIVISION of Blaw-Knox Co.
2068 Farmers Bank Bldg.,
Pittsburgh 22, Pa.

BLAW-KNOX ELECTROFORGED STEEL GRATING

For more details circle NED-234 on enclosed inquiry slip

SENSITIVE TO A "TOUCH"
STABLE
DRIFT-FREE

CONO AIR PRESSURE REGULATOR

The Cono Precision Regulator is ideal for "dead-end," or small volume flowing service. Responsive to setting changes as small as *five thousandths psi.* Holds set pressure regardless of vibration or normal upstream pressure variations. Streamlined design, all brass and stainless steel. Styles for flush panel or line mounting. Available in ¼" pipe size, in a variety of spring ranges from 0-5 to 0-125 psi.

BULLETIN PH-10.

CONOFLOW CORPORATION
2100 ARCH ST.
PHILADELPHIA 3, PA.

Cono-Controls

For more details circle NED-235 on enclosed inquiry slip

SPEED HAND-LABELING ON HARD-TO-LABEL JOBS with Mystik Self-Stik LABELS

SPEED PRODUCTION—No moistening. Stick instantly.

EASY APPLICATION on hard-to-reach, hard-to-label surfaces.

FLEXIBLE and stretchable for curved or uneven surfaces.

PERMANENT—Resistant to stain, moisture, scuffing, delamination. Removable, if desired, without staining.

BEAUTIFUL—Finest color printing; die-cut; embossed; varnished or acetate laminated.

The outstanding qualities of MYSTIK LABELS are due to rubber-saturated stock and the strongly bonded rubber adhesive, providing strength, flexibility, toughness, strong adhesion and ease of handling. Write for full information and samples.

CHICAGO SHOW PRINTING COMPANY
CHICAGO • NEW YORK

2657 NORTH KILDARE • CHICAGO 39

For more details circle NED-236 on enclosed inquiry slip

GRINDERS!
FOR SMALL OR LARGE SHOP USE

. . . STAGGER THESE MACHINES IN YOUR SHOP

ALLOT ONE MACHINE TO EACH GROUP OF OPERATORS . . .

1. SMALL CAPITAL INVESTMENT
2. GREAT ECONOMY

Immediate delivery! TYPE 10 BAP pedestal model 1 H. P. 1750 R.P.M. 110/220/60/1 or 220/440/60/3—other current characteristics on request. Bench or pedestal models.
Arranged for two 10" x 1¼" x ⅜" grinding wheels.
Extra equipment: Twist drill grinding attachment with adaptor—capacity ¼" to 1¼" round or taper shank drills; illuminated eye shields complete with light bulbs, cord and built in switch.

Write today for Bulletin 112.

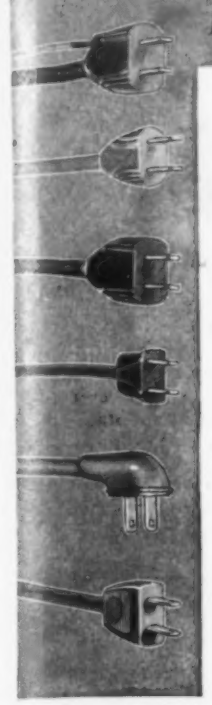
THE STANDARD ELECTRICAL TOOL CO.
2488 RIVER ROAD CINCINNATI 4, OHIO

For more details circle NED-237 on enclosed inquiry slip

5 REASONS FOR CALLING...

CORDS LTD.

For Cords and Cord Sets



★ Fast delivery on cords of standard construction.

★ Complete engineering and manufacturing service on cords for special applications.

★ Integrated engineering-production control from rod mill to mold department.

★ Most comprehensive stock of dies and molds for electronic cords and assemblies in existence.

★ Quality proved by use on millions of products.

Write for details, explaining your application

CORDS LTD.
Division of Essex Wire Corporation,
121 DODGE STREET
DE KALB, ILLINOIS

WIRE SX PRODUCTS

▲ For more details circle NED-238 on enclosed inquiry slip ▲

Bendix *automotive* Electric Fuel Pump

Unmatched for

LONG LIFE and RELIABILITY

Built-in Pressure Release . . . No flooding . . . Assures satisfactory **Re-Starts on Hottest Days**

Dependable as no Fuel Pump has ever been

under all operating conditions

Performance Proven. Years of research, development, and rigorous tests have been made on this pump.

Longer Life—No Pressure Drop. No bearings or levers to wear; no diaphragm to fatigue.

Delivers More Gallons Per Hour. Can deliver more than 30 gallons output per hour. Two or more pumps can be manifolded.

Economical Operation. Low original cost and *long dependable life* make this fuel pump the best buy on the market.

Improves Low Temperature Starting. Tests prove that engines start at 10 to 15 degrees lower with the Bendix Fuel Pump.

Eliminates Vapor Lock. Assures a constant, dependable supply of fuel in the hottest weather.

Low Power Requirements. Only 7 watts at maximum fuel delivery.

Dependable Operation at 75° Below Zero. That's why the U. S. Army Ordnance Corps chose it to pump fuel to heaters in the extreme cold of the Arctic.

Easy to Install—Easy to Service—Tamper-Proof. Simple two-bolt mounting. No adjustments. Electrical system, sealed *in helium*, insures longest possible life.

Light Weight—Compact. A giant in output but a midget in weight—one pound, thirteen ounces.

WRITE TO DEPT. J

Eclipse Machine Division
Elmira, New York · *Division of* Bendix

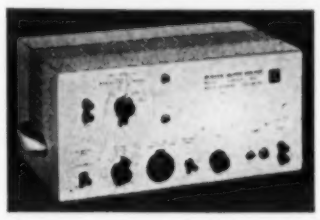
▲ For more details circle NED-239 on enclosed inquiry slip ▲

ULTRA HIGH FREQUENCY SOCKETS
molded of glass bonded mica

Low inter-electrode capacitance is feature of No. 410 ultra high frequency sockets which are injection molded of glass-bonded mica. Dimensional stability of this material allows minimum amount of dielectric to be employed so that air is utilized as the insulator to maximum degree. High arc resistance, high dielectric strength, nonporosity and low dielectric loss at all frequencies including UHF are other features. Sockets will operate continuously at 700° F with practically no change in electrical properties. Contacts can be phosphor bronze or beryllium copper, cadmium or silver plated. Sockets in 7 or 9-pin series can be top or bottom mounted in regular saddles, saddles with ground lugs or snap or JAN types, permitting use of radio tube shields. Made by **Mycalex Tube Socket Corp.**, Clifton 6, N. J.

▲ For more details circle NED-240 on enclosed inquiry slip ▲

CHOPPER AMPLIFIER
has frequency response of 0-500 cps

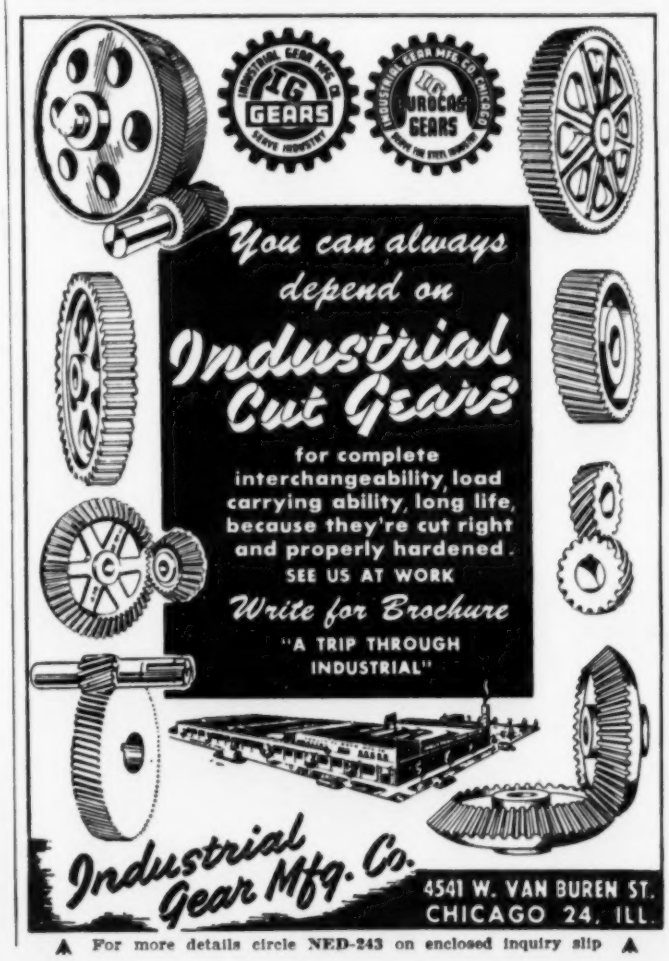


Maximum gain of 800,000, frequency response of 0-500 cps, input impedance of 1 megohm, noise and drift within 25 microvolts, or 2 per cent of full scale output, and a mechanical chopper with a rate of 5000 contacts per second are features of model 300 universal chopper amplifier. Input bucking potential includes both step and continuous controls, and allows the zero to be offset 150 times full scale. Instrument can use any pen recorder to indicate the small potential developed by thermocouples, strain gages and other sources in which the direct and alternating current components are of equal interest. Amplifier will deliver up to 25 ma and can develop plus or minus 80 v. It drives practically all recording galvanometers. Made by **Keithley Instruments**, 3870 Carnegie Ave., Cleveland 15, O.

▲ For more details circle NED-241 on enclosed inquiry slip ▲

DO YOU KNOW? Engineers, managers, inspectors, superintendents, foremen and production personnel can familiarize themselves with Quality Control as a working tool. There's a new home study course available which is composed of 21 lessons in mathematics, blueprint reading, measuring instruments, precision measurements, control of quality of manufactured products, inspection of shop products, and statistical quality control. Interested? Just write John C. Villaume, acting dean, International Correspondence Schools, Scranton, Pa.

▲ For more details circle NED-242 on enclosed inquiry slip ▲



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with a MILWAUKEE BRIQUETTING PRESS

Conserve critical metals . . . **decrease** scrap handling costs . . . **save** storage space with the **MILWAUKEE** Briquetting Press. **It automatically** converts low-grade bulk metal turnings, borings, chips and shavings into dense cylindrical briquettes which are suitable for direct charging into furnace or foundry cupola as **high-grade scrap.** In many plants, savings pay for press in less than one year.

Write today for Bulletin No. 117 for complete details.

SPO 285-SI MILWAUKEE Foundry Equipment Division
6475 Grand Division Ave. • Cleveland 25, Ohio

▲ For more details circle NED-244 on enclosed inquiry slip ▲

ORDER

JOHNSON UNIVERSAL BRONZE

by Bearing Size

SAVE machine time and money. Johnson Bronze Bars are completely machined—I. D., O. D. and ends . . . with 1/64" cut to bring to bearing size. No waste, no defects. Over 350 sizes, inside diameters 1/2" to 7 3/4", and outside diameters 1" to 10" in cored bars. Solid bars 5/8" to 8" diameters. All 13" lengths. Available from Johnson distributors and warehouses.

JOHNSON BRONZE CO.
580 S. Mill St., New Castle, Pa.

Write for New Catalog

JOHNSON JB BEARINGS
Sleeve-Type

▲ For more details circle NED-245 on enclosed inquiry slip ▲

New CROWN

Rust Inhibitor

(Pat. Pending)

ONE Application Stops Rust for Months
RETARDS RUST ALREADY STARTED

Spray or **DIP** *to Protect*

- Finished Goods
- Stock in Bins
- Precision equipment
- Tools
- Spare Parts
- Anything that's Valuable and Subject to Rust

Just put it on and leave it on! High-quality animal wax base fluid will not gum or clog under heat or friction. Not smeary, resists rubbing off, yet does not dry hard. Non-inflammable—harmless to hands, metal, plastics. In aerosol-type spray can or in bulk for dipping.

ORDER TODAY
$2.00 per 12-oz. trial can. Discount for cases of 12. Also in bulk; write for details and discount.

CROWN INDUSTRIAL PRODUCTS CO.
406 Borden Ave., Sycamore, Ill.

Please ship at once
_____(How Many?) cans
_____(How Many?) cases

NAME_____
COMPANY_____
OUR PURCHASE ORDER NO._____
ADDRESS_____
CITY_____ZONE_____STATE_____

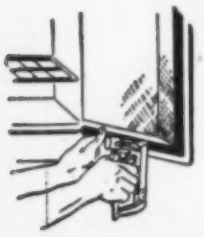
▲ For more details circle NED-246 on enclosed inquiry slip ▲

SPEED UP/ with HANSEN

Hansen speeds attaching wires in radios, TV, screens, aerials, etc.

1001 Uses

—the TACKER that SAVES TIME...STEPS...MATERIALS



Lip tackers available for tacking gaskets, channels and other raised surfaces.

SAVES TIME in all types of tacking and fastening. Fast, easy one-hand operation. Tacker operates fast as you can grip.

SAVES STEPS. Self-contained. Ready for instant, continual use. Vest-Kit for quick refills. No back-tracking.

SAVES MATERIALS. Balanced design insures accurate, precision driving. Economical, efficient use of materials.

36 MODELS
80 STAPLE SIZES

A.L.HANSEN MFG. CO.
5164 RAVENSWOOD AVE. CHICAGO 40 ILLINOIS

▲ For more details circle NED-247 on enclosed inquiry slip ▲

for adding sales appeal to

OLD PRODUCTS (and new ones, too!)

It may cost LESS to give your product the glamour . . . distinctiveness . . . sales appeal . . . of this rich Sherwin-Williams textured finish, than to use conventional metal finishes!

Kem Art Metal (wrinkle) Finishes are economical because they cover with one coat . . . conceal minor surface imperfections and blemishes . . . often eliminate need of extra operations to remove weld marks, etc. They relieve the monotony of large, plain surfaces . . . add interest and eye appeal to any metal product.

Kem Art Metal Finishes—described in this new Sherwin-Williams Brochure AM-514—are part of the complete line of Sherwin-Williams quality finishes especially designed to meet production line requirements and stocked at your nearby local Sherwin-Williams Branch.

Consult your classified telephone directory—check this handy local source for your industrial product finish needs—or mail the coupon below for copy of this brochure. The Sherwin-Williams Co., General Industrial Division, Cleveland 1, O.

SHERWIN-WILLIAMS
INDUSTRIAL FINISHES

THE SHERWIN-WILLIAMS CO.
General Industrial Division, Cleveland 1, O.
☐ Please send copy of AM-514—"Kem Art Metal Finishes"
☐ Please send information on:
_____ (Type of finish)
for _____ (Application)
Name _____
Company _____
Address _____

Another Product of SHERWIN-WILLIAMS INDUSTRIAL RESEARCH
COVER THE EARTH

▲ For more details circle NED-248 on enclosed inquiry slip ▲

ASSEMBLED SPROCKETS
hubs welded to semistock units

By welding one or two hubs to this semistock type A sprocket, it can be converted to a type B or type C sprocket. Thus, made-to-order sprockets are converted to stock items. After welding of hubs, finish machining and bore sizing completes the sprocket to specification. Various pitches and number of teeth can be combined with different hubs in a multitude of combinations. Offered by **Cullman Wheel Co.**, 1333 Altgeld St., Chicago, Ill.

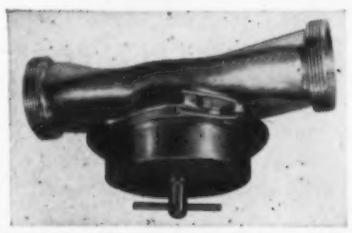
▲ For more details circle NED-249 on enclosed inquiry slip ▲

HYDRAULIC LIFT TRUCK
for handling fragile loads

Equipped with a spring - suspended frame superimposed on the lifting frame, this double-framed hydraulic lift truck is designed for moving such fragile loads as green sand cores, patterns, electronic parts and others. Both frames are raised by action of the horizontal hydraulic lifting unit. Truck is offered in capacities from 2000 to 6000 lb. Toggle-action front wheel equalizer keeps the load level on uneven surfaces. Truck is made in 7, 9 and 11-in. lowered heights and is available with rubber tired wheels. The 5000-lb capacity model is shown. Made by **West Bend Equipment Corp.**, 220 S. Walter St., West Bend, Wis.

▲ For more details circle NED-250 on enclosed inquiry slip ▲

MAGNETIC TRAP
nonagitating to product in line



Grid type magnet with four or six pie-shaped segments, depending upon size, is featured in "full flow" magnetic trap. Improved model is nonagitating to product in the process lines. Wider and flater body design brings product closer to the magnet at a decreased velocity. Foreign matter is easily removed. Trap is made of type 316 stainless steel, with unpolished or polished inside and outside surfaces, 2, 3 or 4-in. OD and choice of Acme sanitary threads, Van Stone ends or IPS screwed ends. Made by **Tri-Clover Machine Co.**, 2910 60th St., Kenosha, Wis.

▲ For more details circle NED-251 on enclosed inquiry slip ▲

JELLIFF RESISTANCE WIRES
ARE VERY MUCH AT HOME IN A HOT • SPOT

ALLOY	OHMS PER CMF.	MAX. OPER. TEMP.	FORMS†	USES
1000	1000	500° F	W-R	Compact, stable precision Resistors
ALLOY C	675	1700° F	W-R	Appliances and Resistors
ALLOY A	650	2100° F	W-R	High-temp. Furnaces and Resistors
ALLOY 45	294	930° F	W-R	Precision Application

† W—wire R—ribbon

★

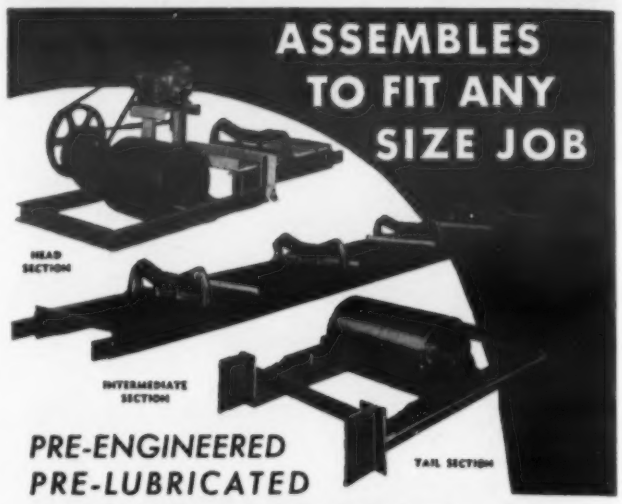
Whether the heat is literal (up to 2100 F), or figurative in the sense that performance under difficult conditions is a *must*, we have an alloy for almost any conceivable requirement. The above Table may suggest possible applications to your products.

★

Complete Technical Data are available from Department 11.

THE C. O. JELLIFF MANUFACTURING CORPORATION SOUTHPORT, CONN.
WIRE PRODUCERS SINCE – 1880
LEKTROMESH • RESISTANCE WIRE • FILTERS • WIRE CLOTH • STRAINERS • DIPPING BASKETS • WIRE MESH PARTS

▲ For more details circle NED-252 on enclosed inquiry slip ▲



PRE-ENGINEERED
PRE-LUBRICATED
PRE-FABRICATED

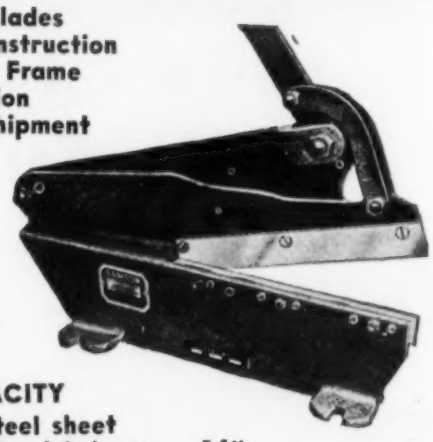
TRANSALL permits easy and quick assembly of your belt conveyor system to fit your needs. Simply use *pre-fabricated* head and tail sections and variable number of standard size Intermediate sections. TRANSALL conveyors are easy to lengthen, shorten, or move by quick dis-assembly. Life-time factory-sealed *pre-lubricated* idlers lower operating and maintenance cost. Write for free illustrated folder. Address TRANSALL, INC., 120 N. 11th Street, Birmingham, Alabama.

TRANSALL SECTIONAL BELT CONVEYOR SYSTEMS

▲ For more details circle NED-253 on enclosed inquiry slip ▲

New SAMSON SLITTING SHEAR

- Extra Long Blades
- All Steel Construction
- Unbreakable Frame
- Easy Operation
- Immediate Shipment



NEW
No. 40-S
$93.00
f.o.b. New York
(subject to change)

CAPACITY
1/8" steel sheet
Length of knives: 14"
Net weight: 140 lbs.

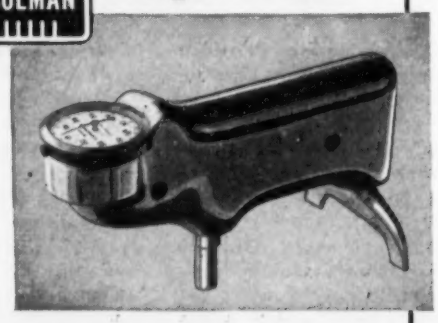
Can also be furnished with knives for corrugated steel sheets.

Catalogue of Metal Working Equipment furnished on request.

JULIUS BLUM & CO., Inc.
Established 1910
536 West 22nd St., New York 11 • WAtkins 9-7042

▲ For more details circle NED-254 on enclosed inquiry slip ▲

Use the BARBER COLMAN Impressor



on
ALUMINUM
COPPER
BRASS
BRONZE
and
PLASTICS

for Fast and Efficient
HARDNESS TESTING

Works on the principle of forcing a hardened, spring-loaded steel point into the surface, the amount of penetration registering instantly on a dial indicator to give a dependable measure of hardness. Operator simply places Impressor on surface and presses down firmly. Can be used in any position, even against edges or ends of pieces when stacked. Requires little effort, ideal for women inspectors. Strongly built for durability and consistent accuracy. Thousands in use. Write for Bulletin F-1689-1.

Comes in velvet-lined, fitted wood case with two extra points and full maintenance instructions.

BARBER-COLMAN COMPANY
1206 ROCK STREET
ROCKFORD, ILLINOIS

▲ For more details circle NED-255 on enclosed inquiry slip ▲

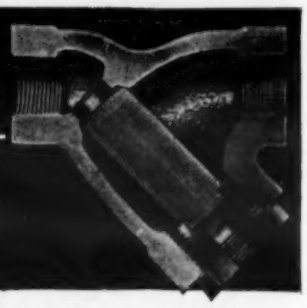
Generalift ★★★★★
PALLET BOXES
1. CUT MATERIALS HANDLING COSTS
2. REDUCE STORAGE COSTS

SEND FOR FREE BOOKLET

General ★★★★★ BOX COMPANY
GENERAL OFFICES: 1859 MINER STREET, DES PLAINES, ILL.
DISTRICT OFFICES AND PLANTS: Cincinnati, Denville, N. J., Detroit, East St. Louis, Kansas City, Louisville, General Box Company of Mississippi, Meridian, Miss., Milwaukee, Sheboygan, Winchendon. Continental Box Company, Inc.: Houston, Dallas.

▲ For more details circle NED-256 on enclosed inquiry slip ▲

It says "STOP" to Solids - "GO" to Fluids



Here is a BETTER Strainer to "police your pipelines"

- FIRST—*The Screen*, a high-grade, woven Monel wire basket that catches solids—lets condensate, oil or other fluids flow freely.
- SECOND—*Finish*. Cadmium plated for protection against corrosion and for better appearance.
- THIRD—*Easily Cleaned*. Blow-off bushing made for easy removal. Bushing and Screen come out together. Screen automatically aligns on reassembly.
- THOUSANDS IN SERVICE—Sold by over 150 Mill Supply Houses. 6 sizes from ½" to 2" for pressures up to 600 lb. Reasonably priced.

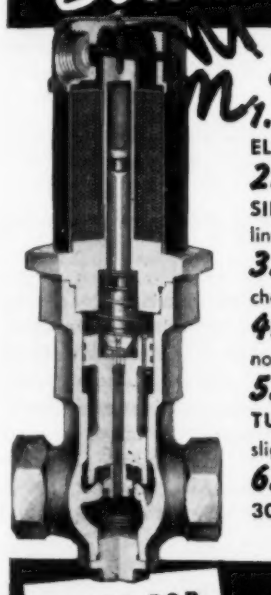
See your supply house or write for Bulletin S-201.

YARNALL-WARING COMPANY
131 Mermaid Ave., PHILADELPHIA 18, PA.

YARWAY STRAINERS

▲ For more details circle NED-257 on enclosed inquiry slip ▲

ATKOMATIC Solenoid Valves



FOR AUTOMATIC OR REMOTE CONTROL

1. DAMAGING WATER HAMMER ELIMINATED.
2. ALL INTERNAL PARTS ACCESSIBLE without removing valve from line or breaking electrical connection.
3. PACKLESS—sealed operating chamber. No outside moving parts.
4. ONLY 3 MOVING PARTS, and no linkage of parts.
5. LINE PRESSURE IS MAIN ACTUATING FORCE—operates with slight pressure drop across seat.
6. OPERATING PRESSURES TO 3000 PSI.

ALL SIZES ¼" to 3"

WRITE FOR LITERATURE

Atkomatic Valve Co.
545 WEST ABBOTT ST.
INDIANAPOLIS 25, INDIANA

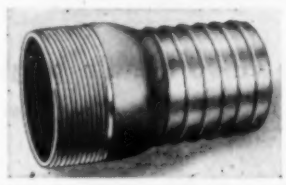
▲ For more details circle NED-258 on enclosed inquiry slip ▲

RADIO FREQUENCY VOLTMETER for dielectric heating apparatus

RMS values of radio frequency voltages in dielectric heating loads are determined quickly with this voltmeter. Exact amount of heat being applied to electrodes is indicated. Equipment consists of capacity voltage divider and crystal rectifier connected to indicating meter calibrated in kilovolts. Two scale ranges of 0-5000 and 0-10,000 v are used, and two styles of instruments handle 200 to 3000 kilocycles or 3 to 50 megacycles. Made by **Westinghouse Electric Corp.**, P. O. Box 2099, Pittsburgh 30, Pa.

▲ For more details circle NED-258 on enclosed inquiry slip ▲

HOSE NIPPLES are nonporous and leakproof



Process used in producing Le-Hi series 650 type SC combination hose nipples renders them nonporous, scale-free and leakproof. They are made of steel tubing in one piece, with accurate hose shank diameters for easy insertion into the hose. Also produced in brass and malleable iron, nipples are made in all popular sizes, plain or rustproofed. Made by **Hose Accessories Co.**, 2702-0 N. Seventeenth St., Philadelphia 32, Pa.

▲ For more details circle NED-260 on enclosed inquiry slip ▲

PROGRAM LINE EQUALIZER designed for communications circuits

Consisting of a parallel network and calibrated step type series control, type 286 porgram line equalizer is designed to improve the frequency response of communications circuits. Four points of equalization, 5, 7.5, 10 and 12.5 dc, are available by selecting the proper terminals. Unit has compact multichannel assemblies of one, two, three or four equalizers and frequency selection switches mounted on a 5¼ x 19-in. relay rack type panel. Assembly is wired, ready to use. In practice, equalizer is connected across the line and the calibrated control set to the degree of equalization required. Made by **Daven Co.**, Dept. P, 191 Central Ave., Newark 4, N. J.

▲ For more details circle NED-261 on enclosed inquiry slip ▲

MERRILL MATERIALS HANDLING DEVICES

3-M-2

MERRILL BROTHERS
56-13 ARNOLD AVENUE MASPETH, N. Y.

▲ For more details circle NED-262 on enclosed inquiry slip ▲

SPEEDY AIR VISE

GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

Speedy Air Vise helps you do dozens of operations faster, better, cheaper—by air pressure! Foot control valve opens and shuts vise instantly, leaving *both* hands free to produce *more!* Jaw opens up to 3 inches, holds castings, parts, jigs, etc. Compact and trouble-free. *Complete with Foot Control, Air Hose* and *Fittings*.....only $29.90

Prompt Delivery from Your Supplier or Write Direct

W. R. BROWN CORPORATION • 2647 N. Normandy Ave. • Chicago 35, Ill.

AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

▲ For more details circel NED-263 on enclosed inquiry slip ▲

keep costs down

with accurate job time records

CALCULAGRAPH

FIGURES ELAPSED TIME ACCURATELY

PRINTS DATE
STARTING TIME
FINISHING TIME
TOTAL ELAPSED TIME

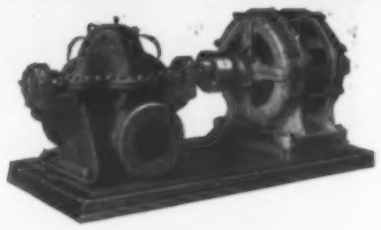
Keep production costs in line with automatically computed, precision Calculagraph job time records. Just stamp card at beginning and ending of the operation. Calculagraph prints date, starting and finishing time plus precision calculated elapsed time. One Calculagraph can record and compute job time data for one entire shop or department by handling any number of cards in any sequence. Accurate, printed Calculagraph records can be filed for future use in estimating on new orders and checking production efficiency. Calculagraphs are low in cost, practically maintenance-free and built for a lifetime of dependable service.

COUPON BRINGS FULL INFORMATION —FILL IN AND MAIL TODAY!

CALCULAGRAPH COMPANY
SUSSEX STREET, HARRISON, NEW JERSEY

Send complete data on Calculagraph to:
NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

▲ For more details circle NED-264 on enclosed inquiry slip ▲



GOULDS Fig. 3450 —Single-stage centrifugal pump. Capacities up to 15,000 G.P.M. Heads up to 500 ft.

This Goulds Pump Gives You These 5 Important Features

1. **Hydraulically balanced impellers** assure freedom from vibration.
2. **Horizontally split casing,** matched and dowelled, makes access to working parts easy. All water passages exceptionally smooth due to careful core making.
3. **Heavy bronze shaft sleeve** ground to smooth finish reduces friction. Saves power. Reduces wear on packing.
4. **Deep stuffing box** and bronze water seal ring minimizes leakage and wear.
5. **Gland horizontally split and bolted** to make repacking easy.

For full details, call your Goulds representative, or write for Bulletin 721.2.

Goulds PUMPS INC. Seneca Falls New York

▲ For more details circle NED-265 on enclosed inquiry slip ▲

FIGHT FIRES with ROCKWOOD TRIPLE-ACTION WATERFOG NOZZLES

Illustrated, Rockwood WaterFOG Nozzle Type SG-48.

With a Rockwood Nozzle you can pick your discharge pattern. Its triple action gives you conventional straight stream, high velocity WaterFOG or low velocity WaterFOG. You get quicker quenching of fires because the Rockwood nozzle goes into action faster . . . . there's more protection to life and nearby combustibles . . . and there's less water damage because less water is used. Write for booklet, "15 Types of Fire Protection," to get the newest information in fire protection.

Tested by Underwriters' Laboratories, Inc., and approved by Factory Mutual Laboratories.

ROCKWOOD

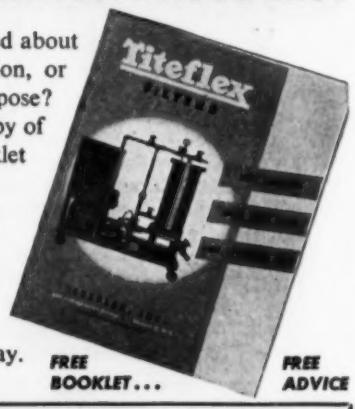
ROCKWOOD SPRINKLER CO.
Engineers Water . . . to Cut Fire Losses
44 HARLOW STREET, WORCESTER 5, MASS.

▲ For more details circle NED-266 on enclosed inquiry slip ▲

REDUCE FILTRATION TROUBLES!

Need a filter but worried about filtration costs, operation, or suitability for your purpose? Then get your Free Copy of the Titeflex® Filter Booklet right away.

Ask for a Titeflex Engineer to set you straight on costs and equipment for your special needs. No obligation. Mail coupon today.



FREE BOOKLET . . . FREE ADVICE

Businesses served by Titeflex Filters include . . .

Chemical • Distilling	Dry Cleaning
Electroplating	Paints & Lacquers
Soap • Cosmetics	Water
Pharmaceuticals	Food Processing
Wine • Beverages	Edible Oils
Machine Tool	Food Extracts

Titeflex

Let Our Family of Products Help Yours

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TITEFLEX, INC.
507 Frelinghuysen Ave., Newark 5, N. J.

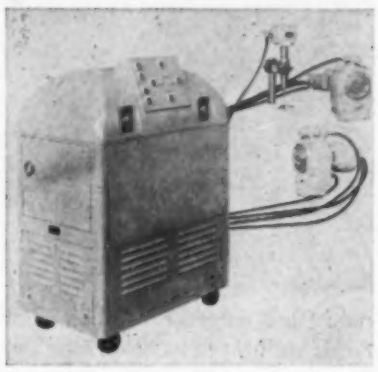
☐ Please send me a copy of your Free Booklet about Titeflex Filters.

☐ We need the advice of a Titeflex Filtration Engineer . . . without obligation on our part.

NAME _____
TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE ____ STATE _____

▲ For more details circle NED-267 on enclosed inquiry slip ▲

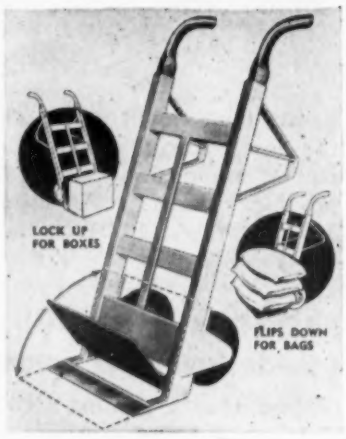
DUPLICATING ATTACHMENT for lathes and milling machines



Automatic duplication of machined internal and external profiles and contours at a production rate on mills and lathes is possible with the Lodge & Shipley Duplicator. It accurately controls two feeds of the machine for reproducing difficult compound curves and 90-degree shoulders from a template or original work piece. A machine attachment, it does not have to be removed from the machine to do other work, but can be moved from machine to machine as the need arises. Distributed by **Tracer Control Co.,** 593 E. Ten Mile Rd., Hazel Park, Mich.

▲ For more details circle NED-268 on enclosed inquiry slip ▲

BOX & BAG TRUCK nose plate flips down to handle bags



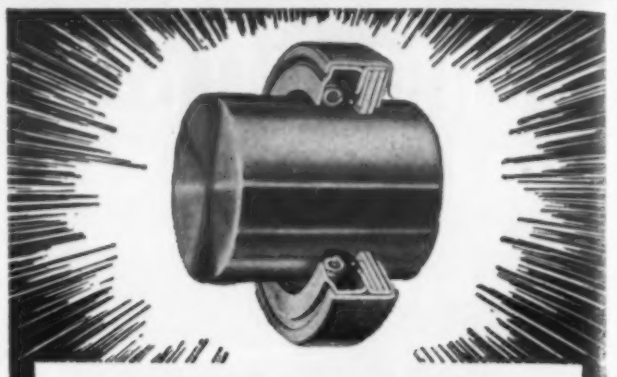
Feature of this Two-in-One combination box and bag truck is heavy hinged nose-plate which flips down over toe fork when foot release pedal is pressed to provide large area base for handling bags. When handling crates and boxes, nose-plate remains snap-locked against frame. Truck is available in three different sizes and has enclosed steel box side shafts, unbreakable formed steel wheel brackets, enclosed end bolts on axle assembly and straight or curved wooden handles. Made by **Dico Co.,** Dept NED, 200 S. W. Sixteenth St., Des Moines 5, Iowa.

▲ For more details circle NED-269 on enclosed inquiry slip ▲

DO YOU KNOW? Here's a bargain. For $31.06, until Oct. 31, you can get two Scotch brand model 92 tape dispensers and 12 rolls of ½ in. by 2592-in. Scotch tape. Dispensers deliver predetermined 1 to 4-in. length of tape at touch of lever. If you do packaging, sealing, labeling, identifying or jobs requiring holding with tape, you'll profit to the tune of $16.56 savings with this deal DS. Offered by Minnesota Mining & Mfg. Co., Dept. NED, 900 Fauquier St., St. Paul 6, Minn.

▲ For more details circle NED-270 on enclosed inquiry slip ▲

▲ For more details circle NED-271 on enclosed inquiry slip ▲



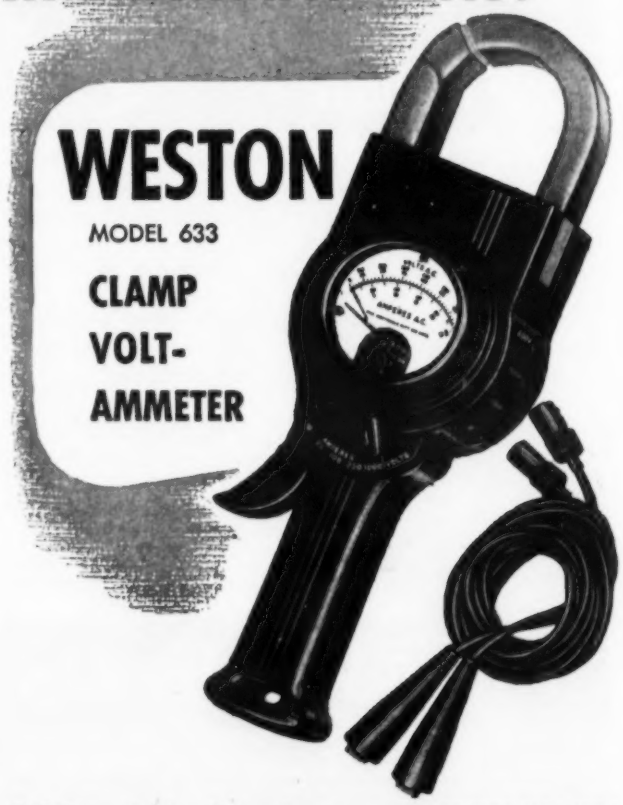
AMERICAN FELT REALLY SEALS!

Above is an OilFoil seal, consisting of two layers of felt, bonded with two septums of Hycar, the synthetic rubber-like substance that is impervious to and unaffected by oils, greases, and the hydrocarbons used in hydraulic systems. Such washers can have one, two, or three septums, to keep lubricants in and seal out water, dirt, gases and retain pressures. If there is no lubricant in the enclosure, the felt can be impregnated with oil or grease, to provide lifetime bearing lubrication. OilFoil seals are supplied cut to exact dimensions, ready for assembly, and usually require no attention between major overhauls. For more information, write for Data Sheet No. 11, "Felt Seals, Their Design and Application." Free.

American Felt Company
62 GLENVILLE ROAD, GLENVILLE, CONN.

▲ For more details circle NED-272 on enclosed inquiry slip ▲

It puts the Squeeze on Maintenance Costs!



A-C Current—five full scale ranges of 1000/250/100/25/10 amperes, with range overlap for good readability. Measurements under 10 amperes readily obtained.

A-C Voltage—three self-contained ranges of 700/350/175 volts insure accurate readability, in upper half of scale. Instrument insulated for 750 volt service.

Isolated Voltage and Current—with circuits insulated from each other, instrument can be connected to both voltage and current sources at same time.

Convenient 6 position switch—easily operated with gloved hand, a flick of the thumb selects any current range, or the Volts position.

Adjustable pointer stop—red stop facilitates measuring starting current of motors.

Here's the instrument that produces big savings by slicing hours off maintenance schedules . . . produces worth-while revenue by forestalling costly repairs and shutdowns. Built to WESTON standards of safety, accuracy and dependability. Also available for A-C Ampere measurement only. Order through your local representative, or write . . . WESTON Electrical Instrument Corporation, 617 Frelinghuysen Ave., Newark 5, N. J. . . . *manufacturers of Weston and Tagliabue instruments.*

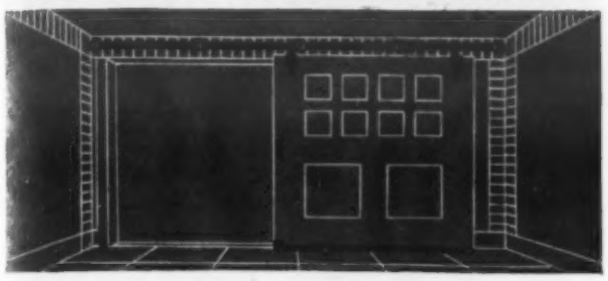
WESTON TAG

WESTON *Instruments*
9566
. . . TO INDICATE—RECORD—CONTROL

▲ For more details circle NED-273 on enclosed inquiry slip ▲

COBURN

SLIDING DOOR HARDWARE



. . . LOW INSTALLATION COST
. . . SMOOTH, EASY OPERATION
. . . LONG, TROUBLE-FREE LIFE
. . . ADAPTABLE FOR BOTH NEW AND REMODELING JOBS

Sliding door hardware for industrial applications of all types: Straight-sliding, sliding-folding, around-the-corner, roundhouse and fire doors.

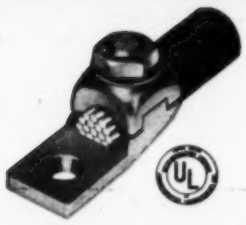
For additional information write to Sales & Engineering, 56 Sterling St., Clinton, Mass. or consult your classified telephone directory.

THE COLORADO FUEL & IRON CORPORATION—Denver, Colorado
THE CALIFORNIA WIRE CLOTH CORPORATION—Oakland, California
WICKWIRE SPENCER STEEL DIVISION—Clinton, Massachusetts

COBURN PRODUCTS
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL & IRON CORPORATION CFI

For more details circle NED-274 on enclosed inquiry slip

QIKLUG CONNECTS QIKER

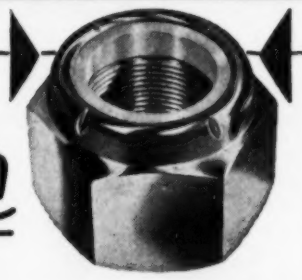


Compact, secure, and quick to install—with a common wrench—on all conductors through 2,000 Mcm. Reusable, too—as easy to salvage as to install.

Ask your Burndy Distributor

BURNDY
NORWALK · CONNECTICUT

For more details circle NED-275 on enclosed inquiry slip



Up-to-date

FASTENING INFORMATION

Have the answers at your fingertips before fastener problems arise. Write ESNA for the latest bulletin on self-locking Elastic Stop Nuts. We'll include the AN-ESNA conversion chart.

You'll find Elastic Stop Nuts' positive, vibration-proof protection can cut maintenance costs . . . insure that precise adjustments will hold true. The famous Red Elastic Collar prevents loosening due to vibration, keeps locking threads corrosion-free, provides for accurate bolt loading and seals against liquid seepage along the bolt threads. Elastic Stop Nuts are available in more than 3000 different types and sizes—all self-locking, vibration-proof and reusable.

WRITE now for ESNA's help with your present or future fastener problems. Address Dept. N15-937.

ESNA Elastic Stop Nut Corporation of America
2330 Vauxhall Road, Union, N. J.

DESIGN HEADQUARTERS FOR SELF-LOCKING FASTENERS

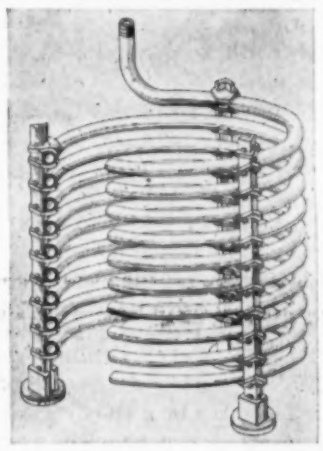
For more details circle NED-276 on enclosed inquiry slip

WEATHERPROOF SWITCHES
sealed by synthetic sponge rubber

Weighing only 1 oz, the double-pole, double-throw assembly of this weather and oilproof pushbutton electric switch is small enough to fit inside a walnut shell. Panel-mounted pushbutton is sealed by synthetic sponge rubber, and the small movement required to operate the subminiature snap-acting switch is provided by resilience of seal. No sliding joints are required. Both single and double pole assemblies for 5-amp 250-v ac are UL listed, and either type will control 30-v dc inductive loads of 2 amp at sea level and 1½ amp at 50,000 ft elevation. Wiring is accomplished by snap removal and replacement of switch elements in mounting brackets. Made by **Minneapolis-Honeywell Regulator Co.**, Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

For more details circle NED-277 on enclosed inquiry slip

PIPE SUPPORTER
for lead heating and cooling coils

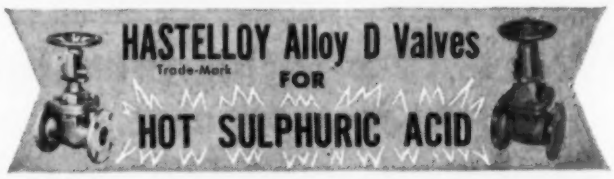


Use of Ferrolum lead-clad steel for legs on lead heating and cooling coils gives them acid resistance, lighter weight than solid lead legs and lower cost. Lead is chemically clad to the steel and expands and contracts with the steel under temperature changes. Legs are standardized and prefabricated for use with various sizes and types of coils. Legs can be purchased in long lengths, cut as required and a lead cap placed at the ends. Cradles are made in sizes for 1 and 2½ in. OD pipe. Components can be provided in stainless steel or other corrosion resistant metals or carbon steel. Made by **Knapp Mills, Inc.**, 23-00 Borden Ave., Long Island City 1, N. Y.

For more details circle NED-278 on enclosed inquiry slip

DO YOU KNOW? If you're a home workshop addict, you'll find much of interest in "Make It Yourself" the new monthly woodworking publication. It will carry detailed woodworking information, with emphasis on power tools and their use. Bulletin will be sent FREE each month. Published by DeWalt Inc. Dept. P-108, 201 Martha Ave., Lancaster, Pa.

For more details circle NED-279 on enclosed inquiry slip



HASTELLOY alloy D valve castings can be obtained with an ultimate strength of from 110,000 to 125,000 psi and hardness as high as Rockwell C-48. These castings have excellent resistance to sulphuric acid, in addition to their high strength.

Some Penetration Tests for HASTELLOY Alloy D in Sulphuric Acid #

Conc., per cent by weight	20 deg. C.	70 deg. C.	Boiling Point
10	0.00019	0.0015*	0.0011
25	0.00011	0.0011	0.00074
60	0.0000074	0.00026*	0.0074
85	0.00019	0.0039	0.025
95	0.000064*	0.0007*	0.035

inches per month * aerated test

For information on HASTELLOY alloy D castings, and for the name of a manufacturer who can supply you with high-quality valves, write to our General Offices.

Haynes Stellite Company
A Division of Union Carbide and Carbon Corporation
UCC
General Offices and Plant: Kokomo, Indiana

"Hastelloy" is a trade-mark of Union Carbide and Carbon Corporation.

For more details circle NED-280 on enclosed inquiry slip

DRILLING PROBLEM?
Switch to
BLACK & DECKER POWER

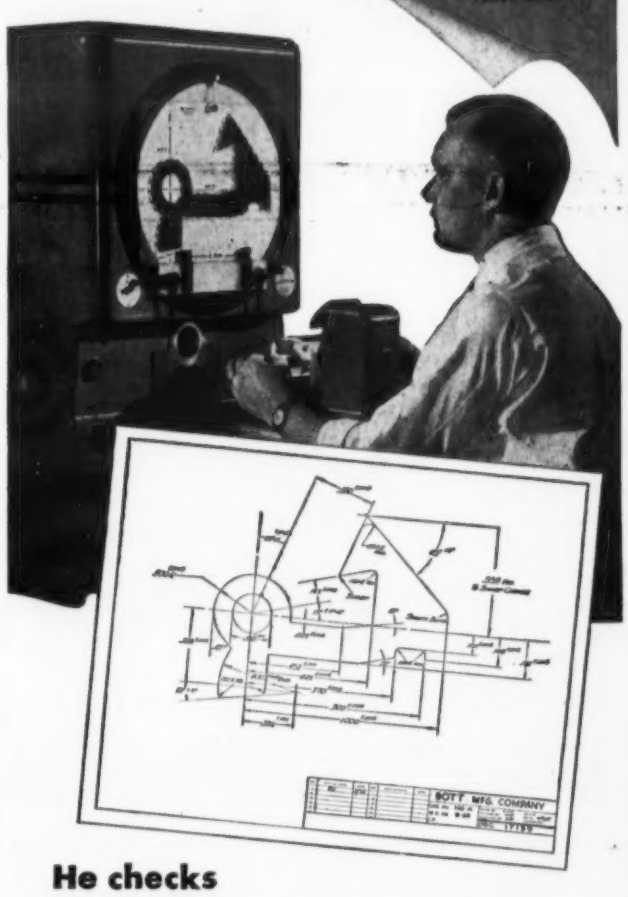
FOR drills to fit your needs, it pays to see your nearby Black & Decker Distributor *first*! You get an unmatched choice of Drill models—capacities from ¼" to 1¼"—choice of handle arrangement—choice of speed, power and price in most capacities. And you get powerful Black & Decker-built motors, full ball-bearing construction, extra-tough parts, husky housings, perfect balance. Write for free catalog to: THE BLACK & DECKER MFG. Co., 662 Pennsylvania Ave., Towson 4, Md.

*Trade Mark Reg. U.S. Pat. Off.

LEADING DISTRIBUTORS EVERYWHERE SELL
B&D Black & Decker
PORTABLE ELECTRIC TOOLS

For more details circle NED-281 on enclosed inquiry slip

Kodak



He checks
15 Dimensions, 8 Radii, 7 Angles
in ONE operation

To check this part completely and accurately by usual methods, you might need as many as two dozen or more different gages—and you still wouldn't be sure all corners were sharp, all angles and radii exact. There's a much faster, more accurate way to do the job completely, one that requires no mechanical gages that can lose accuracy through wear.

On the Kodak Contour Projector, Model 3, you just slip the part into a holding fixture and compare its magnified image with a "chart-gage" over the bright screen. *Every* detail shown on the drawing is quickly and directly compared against the part itself, to close tolerances and in *one* operation. Little training or experience is required to measure all sorts of complex parts, large or small.

To get an idea of the large labor savings that the Kodak Contour Projector can bring to your inspection problems, get in touch with Eastman Kodak Company, Industrial Optical Sales Division, Rochester 4, N. Y.

the KODAK CONTOUR PROJECTOR

Optical Gaging

A new sound movie shows how to simplify complex inspection problems. We'll tell you how to get it for a showing.

For more details circle NED-282 on enclosed inquiry slip

Lighter... TOUGHER

COFFING CHALLENGER SPUR-GEAR HOIST

Never before such rugged shock-resisting strength and easy portability in a spur-gear hoist!

CARRY IT EASILY, set it up anywhere—1-ton model weighs only 39½ lb.

ALL STEEL, even the case—takes abuse as only steel can.

Find out more about the completely new spur-gear hoist that's lighter, stronger, easier to handle. Write for bulletin X9C.

COFFING HOIST CO., Danville, Illinois

Quik-Lift Electric Hoists • Hoist-Alls • Safety-Pull Ratchet Lever Hoists • Mighty-Midget Pullers • Differential Chain Hoists • Load Binders • I-Beam Trolleys

Sold by industrial distributors everywhere.

For more details circle NED-283 on enclosed inquiry slip

BRUNNER SINCE 1906 AIR COMPRESSORS

AIR ..WHEN YOU NEED IT ..WHERE YOU NEED IT ..and ALL YOU NEED!

Compressed air costs practically nothing *if* your air supply is set up for instant availability and in adequate volume at all points of use.

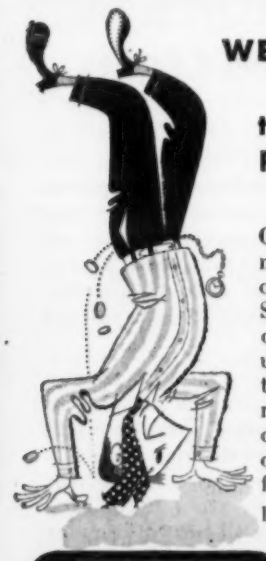
Brunner Air Compressors have an unquestioned reputation for carefree dependability—they stand up under heavy service—and there are models to fit every air power job in the plant.

Model H-1217 Displacement 37.7 CFM. Single stage models from ¼ to 2 hp. Two stage models from 1½ to 15 hp. Horizontal and vertical styles.

BRUNNER MANUFACTURING CO., UTICA 1, N. Y., U. S. A.

BRUNNER SINCE 1906 REFRIGERATION Condensing Units from ¼ to 75 hp. for industrial refrigeration and air conditioning applications. Self Contained Air Conditioners in 4 sizes to 10 hp.

For more details circle NED-284 on enclosed inquiry slip



WE OFTEN DO THIS—

to deliver Synthane Plastics on time

On-time delivery of Synthane laminated plastics parts and materials is one of our prime principles of service. Sometimes we almost have to stand on our heads to make it, but we do usually deliver the goods for our customers when wanted. If you are not now a customer and need materials or fabricated parts with an unusual combination of valuable properties, find out about Synthane. Mail the coupon today for complete information.

SYNTHANE

Manufacturers of laminated plastics

SHEETS
RODS • TUBES
MOLDED-LAMINATED
MOLDED-MACERATED
FABRICATED PARTS

SYNTHANE CORPORATION
North East Road, Oaks, Pa.

Gentlemen:

I'd like to know more about Synthane laminated plastics. Please send your catalog to:

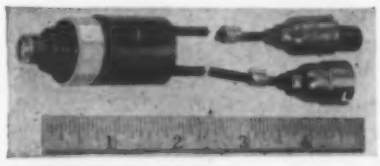
Name_____

Address_____

City_____ Zone____ State_____

For more details circle NED-285 on enclosed inquiry slip

WATERPROOF PUSHBUTTON SWITCH
suited for low-current applications



Electrical circuits under water can be opened or closed with this 10-amp 30-v dc or 125-v ac waterproof pushbutton switch. It will function in temperature range of −65° F to 165° F and withstands salt spray, shock and vibration. Of single-pole single-throw type, it can be supplied normally-open or normally-closed. Waterproof connectors can be supplied on lead wires when required. Made by **Riverside Mfg. & Electrical Supply Co.**, 10228 Michigan Ave., Dearborn, Mich.

For more details circle NED-286 on enclosed inquiry slip

SPRAY GUN
for small refinishing or art work

Adaptable to stenciling, blending, high-lighting, decorative and small refinishing operations, type EGA spray gun has ultrasensitive controls for fine spraying. Spray pattern is medium size and can be adjusted to practically pinpoint for touch-up work. Having diecast aluminum body and trigger which actuates both the air valve and fluid needle, gun is light weight and can be used with standard 2, 4, 6 or 16-oz capacity glass jar fluid containers. Made by **DeVilbiss Co.**, 301 Phillips Ave., Toledo 1, O.

For more details circle NED-287 on enclosed inquiry slip

WOOD DRILLING BIT
has 50-50 Brad-Screw point

Fully controlled power drilling in soft or hardwood using any three-jawed chuck is provided by this 100ED Russell Jennings bit which features a 50-50 Brad-Screw point. Bit can be started and stopped at any time, at any depth, without jamming or binding, even when used with lightweight ¼-in. drills. Brad and screw type points are combined in specially pitched single thread point. Single shortened spur, instead of two, helps balance cutting action, requiring less power and end pressure. Made of tempered high carbon steel with hand-filed extension lips and spurs, bit is available in open stock or in two plastic roll kits containing either five or eight bit sizes. Made by **Stanley Works**, Stanley Tools Div., 104 Elm St., New Britain, Conn.

For more details circle NED-288 on enclosed inquiry slip

When is a lathe too big?

A lathe is too big when:

SHELDON CHICAGO

TS56B 11¼" Swing

(1) When it is too large and complex for any but the most experienced to operate safely.

(2) When the power cost is excessive for the tool load.

(3) When the tool investment is out of all proportion to the requirements.

(4) When it is too cumbersome and too slow.

(5) When it takes up floor space, heat and light in which output could be multiplied with smaller machine tools.

Modern Sheldon Precision Lathes, eliminate these excess costs and loadings on many everyday operations—leaving far more on the profit side. 10"—11" and 13" Swing. "Zero Precision" Tapered Roller Bearings. Increased collet capacity.

Write for catalog.

Sheldon Machine Co., Inc., 4215 N. Knox Ave., Chicago 41, Ill.

For more details circle NED-289 on enclosed inquiry slip

It's just good business to

KEEP FLOORS CLEAN, SAFE, ATTRACTIVE!

Remember: Your workers are as efficient as their equipment!

So conserve manpower in your cleaning, too . . . give your men KENT Floor Maintenance Equipment to keep your floors at their best—at the least cost. It pays to invest in quality!

KENT FLOOR MACHINE with "Balanced Power" combines all-weight-on-brush efficiency with ease of operation. Positive gear driven—only 2 gears used!

KENT VACUUM CLEANER for Wet and Dry pick-up removes scrub water . . . dry vacuums floors, walls, overhead pipes and girders. And it's built to last!

Full information upon request

CLEAN WITH KENT EQUIPMENT

THE KENT CO. INC., 449 CANAL ST., ROME, N. Y.

For more details circle NED-290 on enclosed inquiry slip

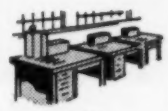
AETNA

is the Single, Logical Source for all your PLYWOOD needs

INDUSTRIES USING AETNA PLYWOOD

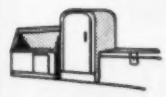
AVIATION

TRANSPORTATION



TOOL

CHEMICAL



ELECTRICAL

Aetna has a large stock of Borden Glues, Monsanto Sealers and Bleaches to meet your most exacting needs.

Aetna provides plywood for every industrial use—by the carload or by the panel—depending on your requirements. Aetna supplies plywood for fabrication, from small toy parts to important members of airplanes . . . for building, from concrete forms to exteriors.

Here are 5 reasons why Aetna is the single, most logical source for all your plywood needs:

1 LARGE STOCK on hand, including sizes cut to your specifications.

2 OVER 40 SPECIES—Fir, Gum, Birch, Walnut, etc. in stock 1/16" to 3" thick, 36" x 48" to 48" x 192".

3 MILL SHIPMENTS to your exact requirements.

4 QUICK DELIVERIES from 4 strategically located warehouses—completely stocked.

5 ENGINEERING STAFF to give you solid technical help in the form of performance data, design calculations, industrial facts.

That's it . . . huge stock, wide range, quick service and technical help at no extra cost.

It will pay you to investigate Aetna Service.

AETNA PLYWOOD & VENEER CO.

1718 N. Elston Ave. Chicago 22, Ill.

ARmitage 6-7100

BRANCH WAREHOUSES: Grand Rapids 7, Mich., Rockford, Ill. Indianapolis 2, Ind.

AETNA—PLYWOOD for every purpose

For more details circle NED-291 on enclosed inquiry slip

Ready...
Aim...
Weld...

With the New Aircomatic® Welding Process

If **your problem** is taming the tough-to-weld metals . . . aluminum . . . aluminum bronze . . . the stainless steels . . .

If **your problem** is to gain higher speeds on your production-line welding runs . . .

If **your welding requirements** call for manual, semi-automatic, or automatic welding equipment which permits production-line joining of metal sections . . .

Then you will want a copy of the Aircomatic Process, Catalog 17 – 8 pages, complete with all the basic information you need to know to obtain faster, high-quality, all-around welding for your plant or shop.

To get your copy of the AIRCOMATIC PROCESS, Catalog 17, please write us today on your letterhead. Address: Advertising Department, Air Reduction Sales Company, 60 East 42nd Street, New York 17, N. Y.

AT THE FRONTIERS OF PROGRESS YOU'LL FIND

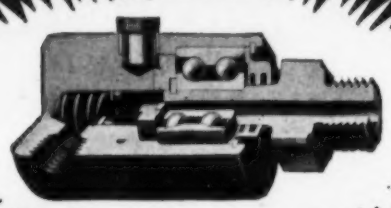
AIR REDUCTION

AIRCO®

AIR REDUCTION SALES COMPANY • AIR REDUCTION MAGNOLIA COMPANY
AIR REDUCTION PACIFIC COMPANY
REPRESENTED INTERNATIONALLY BY AIRCO COMPANY INTERNATIONAL
Divisions of Air Reduction Company, Incorporated
Dealers and Offices in Principal Cities

For more details circle NED-292 on enclosed inquiry slip

FAWICK ROTORSEALS
Performance Proved in
THOUSANDS OF INSTALLATIONS



Machine problems requiring transmission of air or liquids from stationary to rotating machine members are best solved with FAWICK ROTORSEALS.

Precision ROTORSEALS are available in single and multiple passage units, insuring dependable sealing of air, liquids or gases under pressure. They are equally effective in vacuum applications and may be operated continuously or intermittently in either direction.

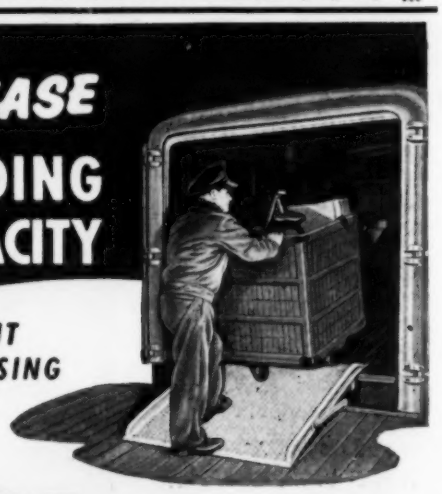
FAWICK AIRFLEX CO., INC.
9919 CLINTON ROAD • CLEVELAND 11, OHIO

For complete information on a FAWICK ROTORSEAL to suit your specific application, write to the Home Office, Cleveland, Ohio.

FAWICK Airflex
INDUSTRIAL CLUTCHES AND BRAKES

For more details circle NED-293 on enclosed inquiry slip

INCREASE
LOADING CAPACITY



WITHOUT INCREASING COSTS!

MagLiner
MAGNESIUM
DOCK BOARDS

MAGNESIUM light! MAGNESIUM strong!
MAGLINER Dock Boards provide strength-to-spare for the heaviest of loads and equipment, yet are easily handled by one man! Eliminate loading accidents . . . lifting injuries! Get the benefits of smoother, faster, more efficient loading. Before investing in any dock board, write for descriptive bulletin DB-203.
Standard and Custom-engineered Models

MAGLINE, INC. • P.O. BOX 396 • PINCONNING, MICHIGAN

For more details circle NED-294 on enclosed inquiry slip

SURFACE COMPARATOR
checks surfaces at 30X magnification for comparison with standards

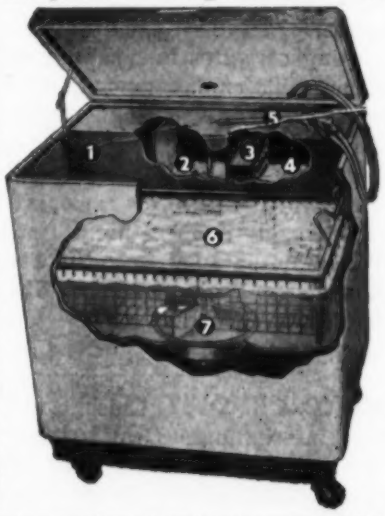
Greater flexibility in use, increased portability and improved appearance are features of model BL-122 Faxfilm surface comparator. Clear plastic replica of a surface is made quickly and projected in microprojector to show minute details of surface condition with a marked three-dimensional effect. Comparison of work specimens can be made with standard finishes in surface roughness inspection. Device also permits comparisons of finishes obtained in machinability studies or comparison of surface changes in wear and life tests. Equipment projects two Faxfilm replicas at 30-diameter magnification.

Weighing less than 30 lb, unit has accessory and file case which fits in base. For travel use, when comparison projection is not required, one projector can be removed from the large unit and carried in small accessory case. This contains all needed material to make surface studies. Made by **Brush Development Co.,** Instrument Div. 36G, 3405 Perkins Ave., Cleveland 14, O.

For more details circle NED-295 on enclosed inquiry slip

PARTS WASHING MACHINE
agitation furnished by ½-hp motor

Constant filtration of the cleaning solution and incorporation of a power rinse gun (5) are features of the Turbo-Blast Jr. parts cleaning machine. It has the same standard impeller (7) for solution agitation as the previously announced larger machine. The agitator is powered by a ½-hp motor. Fusible link (1) closes the lid instantly in the event of fire, thus smothering the flame. Used cleaning solution enters settling tank (4) and passes through filter (3) and is stored in tank (2) ready for reuse. Caster-equipped unit measures 35½ in. high, 29½ in. wide and has a tank depth of 17 in. The parts basket (6) measures 26 x 14 x 6 in. Made by **Storm-Vulcan, Inc.,** 2225 Burbank St., Dallas 19, Tex.



For more details circle NED-296 on enclosed inquiry slip

Top quality filing at new low prices!

for your drawings, tracings, blueprints and plans

Here is filing news—top quality map and plan drawer files at a new low price. Production economies make it possible to offer these files in 5 drawer sections, (exceeding government specifications).

Featuring: furniture steel construction, case hardened rollers, hinged flap compressors and rear hood, quality hardware.

Diebold INCORPORATED
record handling systems
2041 Mulberry Rd., S.E.,
Canton 2, Ohio

Send me complete facts on Diebold Map and Plan Drawers.

NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

For more details circle NED-297 on enclosed inquiry slip

SYNTRON
SELENIUM RECTIFIERS

Made by a new process to a uniform, high quality for continuous, heavy-duty service.
One inch square to 12- by 16-inch cells in standard stacks or for customer assembly.

Write For FREE Catalog Folder

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

For more details circle NED-298 on enclosed inquiry slip

Assure Free-Flowing Bins, Hoppers and Chutes with

SYNTRON
"Semi-Noiseless"
ELECTRIC VIBRATORS

Now, Syntron presents a complete line of Semi-Noiseless Electric Vibrators for use in installations located close to workers where noise is a major factor.

Eliminate arching and plugging in bins, hoppers and chutes of any size and shape—whether made of steel, wood or concrete. WRITE TODAY for Free Catalog Folder.

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

For more details circle NED-299 on enclosed inquiry slip

Handling Small Parts?

Speed up Production!

Feed Parts
- **Single File**
- **In Oriented Position**
- **Automatically**
- **At Controlled Rates**

SYNTRON
PARTS FEEDERS

INCREASE CAPACITY of grinders and presses, inspection and packaging devices, and other automatic processing equipment. Feed without damage, parts of most sizes, shapes and materials at reduced costs. WRITE today for Free Catalog Folder, or send details of your problem along with sample parts for testing to . . .

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

For more details circle NED-300 on enclosed inquiry slip

American Optical

SPEEDS PRODUCTION

with "The right file for the job"

LATHE FILING *housing part of Micro-Surfacer with Nicholson Long Angle Lathe File.*

In the American Optical Company's recently developed Universal Micro-Surfacer, new heights of accuracy and speed are attainable in the production of prescription optical lenses.

Properly shaped, accurately cut, uniformly hardened regular and special files are necessary for many of the hand finishing and fitting operations in its construction and that of other American Optical products.

Does the manufacture of *your* products call for fast or precision filing . . . on brass, aluminum, babbitt, plastics, stainless steel, die or foundry castings, lathe work? Nicholson has *The right file for the job* in the highest quality.

NICHOLSON FILE COMPANY
34 Acorn Street, Providence 1, R. I.
(In Canada, Port Hope, Ont.)

NICHOLSON
A file for every purpose
SOLD THROUGH INDUSTRIAL DISTRIBUTORS

▲ For more details circle NED-301 on enclosed inquiry slip ▲

For Lubricating Devices Call On GITS First!

GITS Bros. covers the *entire range* of lubricating devices: Oil Hole Covers, Oil Cups, Grease Cups, Bottle Oilers, Gauges. Gravity-Feed, Wick-Feed, Constant Level, Vibrating Rod styles. Threaded or Drive-type. Elbow or Straight.

GITS Bros. offers the most complete selection of standard styles.

GITS consistent quality in design, materials and machining has made Gits Lubricating Devices the standard for industry for more than 40 years.

GITS Lubricating Devices are far-famed for solving tough oiling problems at low cost.

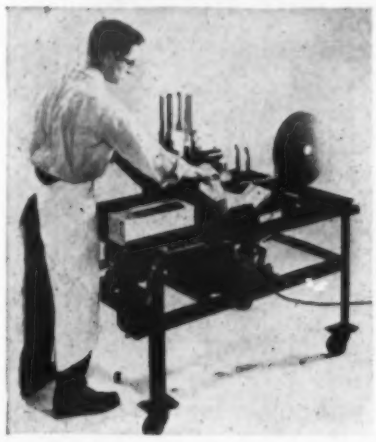
GITS Bros. Engineering Staff—true specialists in lubrication engineering—is at your disposal.

Write today for free illustrated Price Guide Catalog. Use it as your handy reference for lubricating devices.

GITS BROS. MFG. CO.
1833 S. Kilbourn Ave. • Chicago 23, Ill.

▲ For more details circle NED-302 on enclosed inquiry slip ▲

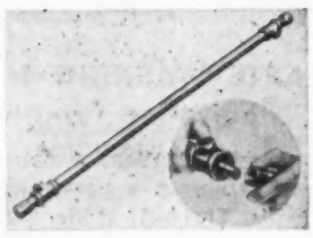
COUNTING-BANDING MACHINE handles 30,000 envelopes per hour



Over 30,000 loose cards or envelopes can be stacked, squared, counted and banded in groups of 12 or 25 by this automatic counting and banding machine. It handles sizes from 3 x 4 in. to 6 x 7½ in. made of any stock. Electrically powered, cam and rocker arm-operated device bands envelopes with cellophane or paper tape and delivers them ready for manual insertion in boxes. Machine measures 50 x 34 x 52 in. and has table height of 30 in. A vacuum pump moving 97 cu in. of air per revolution is required for envelope fed, or machine can be attached to a plant vacuum system of same rating. Made by **Berlin & Jones Co.**, 615 W. 26th St., New York 1, N. Y.

▲ For more details circle NED-303 on enclosed inquiry slip ▲

AFTER-COOLER for 1-15-hp compressed air systems

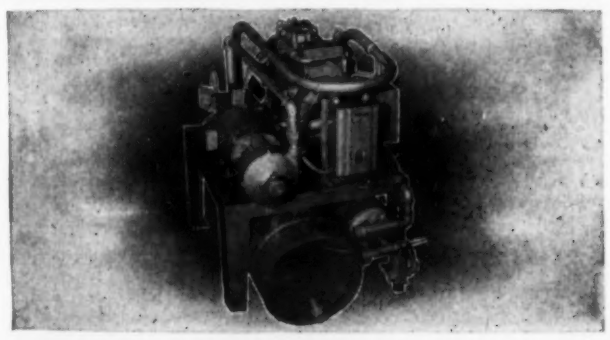


Feature of compact water-cooled after-cooler is Heat-X longitudinal fins which provide maximum heat transfer with minimum air pressure drop. Unit protects pipe lines against rust and corrosion, air instruments against fouling, eliminates freezing of water in pipelines and tools, prevents receiver tank explosions and improves paint spraying quality. Tubing and longitudinal fins are made of copper and are readily removable for cleaning or replacement. Air and water are sealed from each other by synthetic O-rings. Air is cooled to within 10° F of water supply temperature. After-cooler is for vertical or horizontal application in 1 to 15-hp compressed air systems. Made by **Heat-X-Changer Co.**, 10 N. Main St., Brewster, N. Y.

▲ For more details circle NED-304 on enclosed inquiry slip ▲

DO YOU KNOW? Chicago will be the scene of the 11th International Heating and Ventilating Exposition Jan. 26 to 30, 1953. The latest and best in heating, ventilating and air conditioning equipment and accessories will be on display at the newly air-conditioned international Amphitheatre. Sponsored by the ASH&VE, this show is managed by International Exposition Co., Grand Central Palace, New York, N. Y.

▲ For more details circle NED-305 on enclosed inquiry slip ▲



PEAK PRODUCTION with *FLOW-COLD**

For increased production in welding, plating or machine tool operation use the Acme Flow-Cold Liquid Chiller. Whether your problem is cooling water for welding, plating and anodizing operations or oil coolants for machine tools, you'll find the 'packaged' Flow-Cold unit the perfect answer. Regardless of fluctuations in climactic or surrounding temperatures, your solutions are maintained at a *constant, even temperature.*

These chillers keep your coolants at an optimum temperature for *peak production,* permitting greater speed of operation, maximum production and longer tool life *with less maintenance.* Compact, packaged and easy to install, top industrial users are installing Flow-Colds and reporting large production gains. Write Dept. FC today for complete details.

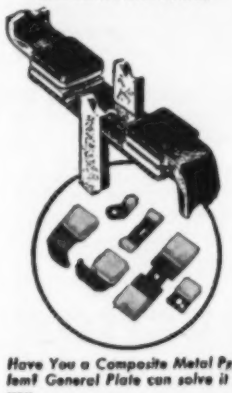
*Trade Mark

ACME INDUSTRIES, INC.
Flow-Cold Division, JACKSON, MICH.
Continuously serving the Air Conditioning and Refrigeration Industries since 1919

▲ For more details circle NED-306 on enclosed inquiry slip ▲

PROBLEM: How to Get Higher Performance and Longer Wearing Qualities in Contact Assemblies

GENERAL PLATE: Meets the Specified Requirements with TOP-LAY, A Composite Metal Combination



Have You a Composite Metal Problem? General Plate can solve it for you.

Manufacturers of electric motor starters had frequent trouble with contact assemblies which were made by brazing the contact to the base metal carrier. This method results in annealed contacts and carriers which in turn means lack of strength, poor wearing qualities and short contact life.

General Plate's Top-Lay contacts and contact material meet the engineering specifications by providing the higher performance necessary. Made by cladding silver or precious metal strip to suitable base metal, Top-Lay is cold worked by profile rolling which gives it a hard, long-wearing surface. In addition, Top-Lay saves on fabrication costs as it is easily blanked and formed to the required shape. (For information on Top-Lay write for Technical Data Bulletin #714.)

No matter what your metal problem, it will pay you to consult General Plate. Their vast experience in cladding precious to base metals, or base to base metal combinations can overcome your problems . . . often reduce costs as well.

General Plate Products include . . . Precious metals clad to base metals, Base metals clad to base metals, Silver Solders, Composite contacts, buttons and rivets, Platinum fabrication and refining, Age-hardenable #720 Manganese Alloy.

GENERAL PLATE *Division of Metals & Controls Corporation*
89 FOREST STREET, ATTLEBORO, MASS.

▲ For more details circle NED-307 on enclosed inquiry slip ▲

CRANE *Quality* brass steam cocks

125 and 250-POUND WORKING PRESSURES

Get your brass steam cocks from Crane and be sure of smooth operation with positive closure.

Big selection in the 125-Pound Class—two, three and four-way; square, flat and tee head; with and without check. Sizes up to 2-inch.

Extra strong 250-Pound steam cock of Crane Special Brass available only in two-way pattern with square head. Sizes up to 2-inch.

For full details on Crane Brass Steam Cocks ask your Crane Representative—or see your Crane Catalog.

CRANE CO., 836 S. Michigan Avenue, Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

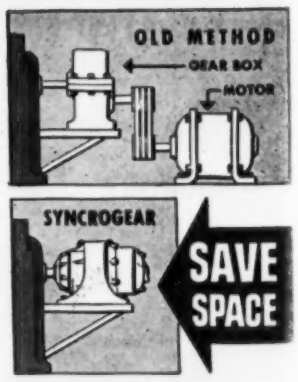
CRANE *Everything for Every Piping System*

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

▲ For more details circle NED-308 on enclosed inquiry slip ▲

SAVE SPACE

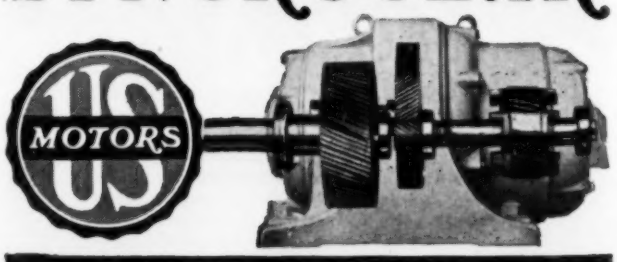
Instead of using an external gear box or old fashioned open belts and chains, now you can install a U. S. Syncrogear Motor with built-in gears. You save space. Gears are fully enclosed and hardened for long-life service. Pyramidal structure insures permanent alignment.



10 to 10,000 RPM
¼ to 30 h.p.

Write for Bulletin

SYNCROGEAR



U.S. ELECTRICAL MOTORS Inc.
Box 2058, Los Angeles 54, Cal. Milford, Conn.

▲ For more details circle NED-309 on enclosed inquiry slip ▲

Reciprocating action of the Commander Drill Chip Breaker breaks chips into small pieces that travel up drill flutes . . . permitting higher drilling speeds . . . doubles and triples production of shallow OR deep holes. Long chips which cause drill breakage, scored holes, slow jig and fixture loading, are eliminated—small, easy to handle chips flow up out of hole continuously, permitting coolant to reach cutting edge of drill. Assures longer drill life, more holes per sharpening, more holes per hour.

ORDINARY CHIPS

CHIP BREAKER CHIPS

Your nearby COMMANDER Distributor has the Drill Chip Breaker and other Commander Production Tools.

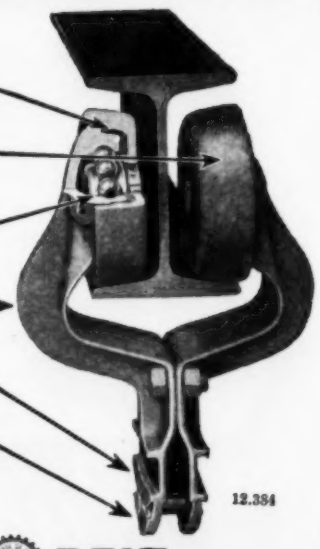
Write FOR CATALOG #851 which describes Commander's Production Tools

Commander MFG. CO.
4220 W. KINZIE STREET
CHICAGO 24, ILLINOIS

For more details circle NED-310 on enclosed inquiry slip

For more details circle NED-311 on enclosed inquiry slip

Important points to look for when you buy trolleys
You get them all when you buy Link-Belt



LINK-BELT
LINK-BELT COMPANY
Dept. 22, 307 N. Michigan Ave.
Chicago 1, Ill.

For more details circle NED-312 on enclosed inquiry slip

CENTRIFUGAL FAN is nonoverloading type

Having only one-third the noise intensity of previous models, this nonoverloading type centrifugal fan is 92 per cent efficient. Wheel sizes range from 40¼ to 108¾-in. diameters for volumes up to 600,000 cfm. Airfoil blade design and aerodynamic changes in inlet and casing have boosted mechanical efficiency by 8 per cent and reduced noise intensity level by 5 decibels. Made by **Westinghouse Electric Corp.**, Sturtevant Div., 200 Readville St., Hyde Park, Boston 36, Mass.

For more details circle NED-313 on enclosed inquiry slip

RECORDING POTENTIOMETER chart speeds and ranges are easily changed by screwdriver adjustment

Simplified chart frame of null-balancing (potentiometer) type recorder swings out a full 180 degrees with chart always remaining in time sequence. When frame is opened, the pen lifts automatically, thus reducing false line drawing and pen damage. Design facilitates chart changes, as well as speed and range changes. Screwdriver adjustment provides selection of five chart speeds from inches per hour to feet per minute.

Instrument case measures 15¾ x 11½ x 14¾ in. and can be flush, wall or table mounted. All servicing is from the front. It measures and records temperature, alternating and direct current voltage or current, resistance, speed ratio, power, frequency and other quantities that can be converted into electrical values. Made by **Weston Electrical Instrument Corp.**, 617 Frelinghuysen Ave., Newark 5, N. J.

For more details circle NED-314 on enclosed inquiry slip

DO YOU KNOW? A desk top machine is now available which will produce precision headline-type compositions in any size from 18 to 144-point by means of photocontact prints. Razor sharp prints are produced speedily for all types of reproduction printing or engraving work. Fonts having 93 characters are available in several faces. Developed by Halber Corp., 4151 Montrose Ave., Chicago 41, Ill.

For more details circle NED-315 on enclosed inquiry slip

Quick Acting Couplers put Air at your fingertips

Plug in compressed air as you would electricity with **Schrader Quick Acting Couplers.** Spot couplers along walls, benches or columns to put air just where it's needed. Plug in your air tools close to the work.

A simple push locks air line in place, automatically starts air flowing. A swivel action prevents hose kinking. Line cannot be accidentally uncoupled—it requires a definite man-made twist on the sleeve. Uncoupling automatically shuts off air.

Available in many sizes, both for standard and heavy duty work, Schrader Quick Acting Couplers make air one of your most useful tools. You'll find full details in the Schrader catalog. Send for it today.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Ave., Dept. E-35, Brooklyn 17, N. Y.

For more details circle NED-316 on enclosed inquiry slip

GOOD LOOKING?

YES! Hackney Seamless Deep Drawn Shapes and Shells can give your products the kind of advantages your customers will go for in a big way—streamlined shapes . . . smooth surfaces . . . absence of unsightly bolted or riveted seams. Hackney Deep Drawn Parts are strong, too—lightweight and durable. Ask Pressed Steel Tank Company engineers to help you design better looking products at low cost. Send today for full information.

PRESSED STEEL TANK COMPANY
Manufacturer of Hackney Products
1450 S. 66th St., Milwaukee 14
1324 Vanderbilt Concourse Bldg., New York 17
255 Hanna Bldg., Cleveland 15
936 W. Peachtree St., N.W., Room 136, Atlanta 3
208 S. LaSalle St., Room 779, Chicago 4
578 Roosevelt Bldg., Los Angeles 17
CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

For more details circle NED-317 on enclosed inquiry slip

Tempilstiks°

the amazing crayons that tell working temperatures from 113° to 2000° F.

in welding
flame-cutting
tempering
forging
casting
molding
drawing
straightening
heat-treating
in general

$2 each
gives up to 2000 readings

It's this simple: Mark the workpiece with the proper Tempilstik° When the mark melts, the specified temperature has been reached.

Available in these temperatures (°F)							
113	200	288	375	650	1000	1350	1700
125	213	300	388	700	1050	1400	1750
138	225	313	400	750	1100	1450	1800
150	238	325	450	800	1150	1500	1850
163	250	338	500	850	1200	1550	1900
175	263	350	550	900	1250	1600	1950
188	275	363	600	950	1300	1650	2000

Also available in pellet and liquid form.

FREE SAMPLE PELLETS
Use this coupon. Specify temperatures of interest to you.

TEMPIL° CORP., 132 West 22nd St., N. Y. 11, N. Y.
Please send free sample pellets in the following rating_____
Name_____
Company_____
Address_____

For more details circle NED-318 on enclosed inquiry slip

Tool Experts Know, and Even Ghouls ...that

PROTO means PROfessional TOols!

Superior design is one of the big reasons why PROTO tools are preferred by *professionals*. Each tool is light but strong, balanced, easy handling and snug fitting. Long life and extra safety are due to properly engineered designs, accurate manufacture, special alloy steels and scientific heat treating. Buy PROTO, the truly *professional* tools from your dealer today. Send 10¢ for 68-page catalog to

The PROTO Line Includes Wrenches, Pliers, Screwdrivers, Punches, Chisels, Sockets & Handles and Many Others.

PLOMB TOOL COMPANY
2275Q Santa Fe Ave., Los Angeles 54, Calif.
5282

Eastern Factory—Jamestown, N.Y.

PROTO TOOLS LOS ANGELES

▲ For more details circle NED-319 on enclosed inquiry slip ▲

Need a RIGHT ANGLE drive for limited space?

Perhaps compact, powerful ANGLgear will solve your power transmission problem. ANGLgears are so compact they fit into the palm of your hand. They are so adaptable that two models meet most industrial requirements. Model R-300 is rated at 1/3 hp at 1800 rpm—Model R-320 at 1 hp. Both models are lubricated for life, have hardened gears and antifriction bearings. Write for literature, and the name and address of your nearest ANGLgear distributor.

ANGLgears are sold exclusively through industrial distributors.

AIRBORNE ACCESSORIES CORPORATION
1414 Chestnut Avenue, Hillside 5, New Jersey

©A.A.C.

▲ For more details circle NED-320 on enclosed inquiry slip ▲

"PAID FOR ITSELF ON ONE JOB!"

Foredom FLEXIBLE SHAFT MACHINES

have many time-saving applications but users often find a Foredom REPAYS ITS COST on ONE JOB through eliminating an expensive disassembly and re-set job on such tasks as removing high spots on gears and touching up tools or cutters in a production set-up. The secret's in Foredom's extra small handpieces which handle like a pencil and penetrate into spots inaccessible for other tools.

Indispensable for "SMALL WORK" GRINDING AND FINISHING JOBS

Foredoms are profitable additions to ALL 3 departments—Production, Tooling and Maintenance. 5 HANDPIECE TYPES (all instantly interchangeable) produce versatility to a marked degree.

SPOT THEM LIBERALLY ABOUT THE PLANT for emergency and every-day use. Their cost is negligible. Prices start at $17.75.

Quality Tested Since 1922

SEE YOUR INDUSTRIAL SUPPLY DISTRIBUTOR. IF HE CANNOT SUPPLY YOU WRITE TO US. MAIL COUPON FOR CATALOG.

FOREDOM ELECTRIC CO., Dept. 5257
27 Park Place, New York 7, N. Y.
Send your catalog No. 5257, showing different uses of Foredom Flexible Shaft Machines.
Name .....
Address .....
City & Zone ..... State .....

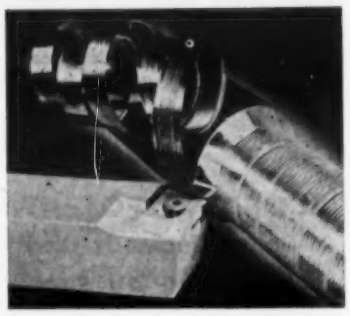
▲ For more details circle NED-321 on enclosed inquiry slip ▲

WICK FEED OILERS
feed filtered oil to bearings

Offered in 1/16 to 3/8-oz capacities, style WOB brass-bodied wick feed oilers have dustproof screw cap, and they feed filtered oil. Oil in body is carried through wick over the standpipe to bearing by capillary action. One-piece brass body and knurled screw top are machined from solid bar stock. Wicks are removed easily for stopping flow of oil. Made by **Oil-Rite Corp.**, 2364 Waldo Blvd., Manitowoc, Wis.

▲ For more details circle NED-322 on enclosed inquiry slip ▲

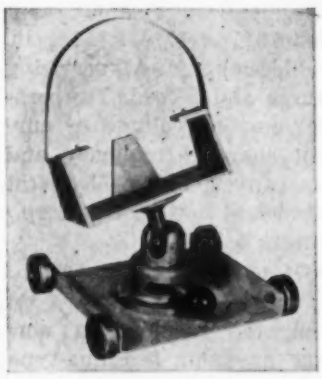
CLAMP-ON TURNING TOOL
takes heavy cuts on large diameters



Turning, facing, shaping and boring of large diameters can be performed by Hefti-Cut clamp-on turning tool which can take cuts 1 in. deep at 3/16-in. feed in 41/40 carbon tool steel at 88 surface feet per minute. Tool consists of an alloy steel shank which holds carbide blanks. Two-way blank positioning adjustment allows an estimated 60 per cent of the blank to be used effectively. Heavy cuts can be taken without cracking the carbide tip. Offset of the anvil is such that solid support is afforded by the shank body. Three styles are available each in several sizes. Made by **DoALL Co.**, 256 N. Laurel Ave., Des Plaines, Ill.

▲ For more details circle NED-323 on enclosed inquiry slip ▲

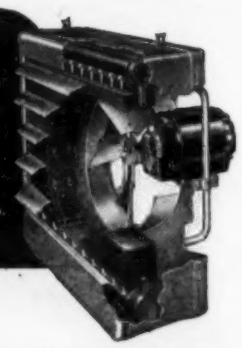
WORK POSITIONERS
mounted on movable dollies



Rectangular and cylindrical parts weighing up to 24 lb can be held and positioned at any angle for assembly operations by the Junior Powrarm adjustable positioner which is mounted along with appropriate fixtures on dolly equipped with roller skate wheels. Unit travels on iron tracks affixed to continuous bench height tables. Spring stops hold it at each assembly operation. All sides of work are available to the assembly operator. Some standard fixtures and adaptors are available for use with these positioners. Made by **Wilton Tool Mfg. Co.**, Dept. NED, 925 Wrightwood Ave., Chicago 14, Ill.

▲ For more details circle NED-324 on enclosed inquiry slip ▲

Less Overhead When You HEAT Over Head with...



DUNHAM UNIT HEATERS

Why let ineffective heat distribution run up fuel bills—and overall operating expenses?

Why not look into these Dunham Horizontal Discharge Unit Heaters—see how they give you heat where you need it most . . . quietly.

Dunham's resiliently mounted motors; slow-speed fans; and sturdy one-piece fan shroud—all combine to direct air efficiently through individually adjustable louvers.

For complete information about long-lasting, expense-saving Dunham heaters, WRITE FOR BULLETIN 1301-14.

DUNHAM

C. A. Dunham Co.
400 W. Madison St., Chicago 6, Ill.
In Canada:
C. A. Dunham Co. Ltd., Toronto
In England:
C. A. Dunham Co. Ltd., London

HEATING SYSTEMS AND EQUIPMENT

▲ For more details circle NED-325 on enclosed inquiry slip ▲

SAVE 3 WAYS WITH STAYNEW HYDRAULIC FILTERS ON YOUR EQUIPMENT

MODEL HE Hydraulic Filter

1. SAVE WEAR ON COSTLY EQUIPMENT
2. SAVE SPOILAGE AND REJECTS AT POINT OF USE
3. SAVE MAN HOURS WASTED IN EQUIPMENT REPAIRS AND MAINTENANCE

For top performance and economical operation, specify Staynew Filters as original equipment on your hydraulically operated machinery. All types of metallic mesh and fabric media are available.

Our Enginering Department will welcome the opportunity of recommending the type of Staynew Filter best suited for your specific need. Write today for Bulletin HF-2.

Representatives in Principal Cities

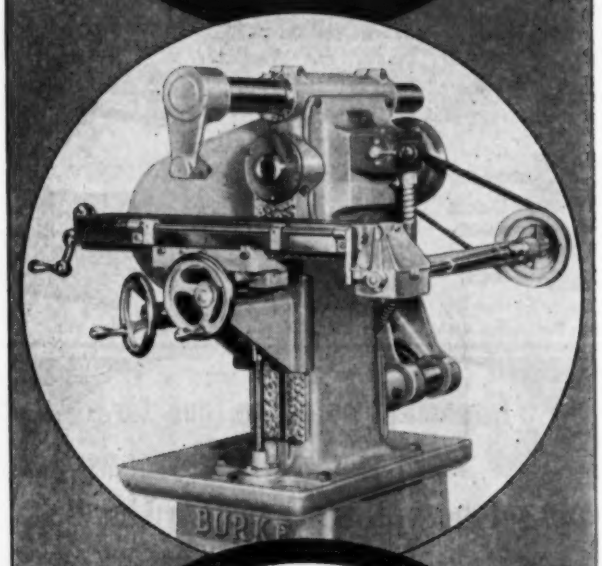
DOLLINGER STAYNEW FILTERS

DOLLINGER CORPORATION
49 Centre Pk., Rochester 3, N. Y.

ALL TYPES OF FILTERS FOR EVERY INDUSTRIAL NEED

▲ For more details circle NED-326 on enclosed inquiry slip ▲

SPEED PRODUCTION OF SMALL PARTS AT SMALL COST with dependable BURKE BENCH MILLERS



Bear-for-work Burkes, in hand and power feed models are cutting time and cost on jobs formerly done on big millers in many modern production lines. Versatile Burkes are also on duty in thousands of tool, development, repair and school shops. Send for circulars describing models and attachments.

THE Burke MACHINE TOOL CO.

A Division of U. S.-BURKE MACHINE TOOL CO.
BROTHERTON ROAD 2, CINCINNATI 27, OHIO

▲ For more details circle NED-327 on enclosed inquiry slip ▲

FOR TOP-QUALITY FORGINGS FOR THE DC-6

Douglas counts on FLASH-O-LENS inspection

Soundness of forgings for the DC-6 can be determined more readily by using FLASH-O-LENS, reports Douglas Aircraft Co.

THE REASON: This handy device *spotlights* the work and *magnifies* it in sharp detail. Interpretation of grain structure — key to forging quality — is speeded up ... results are more accurate.

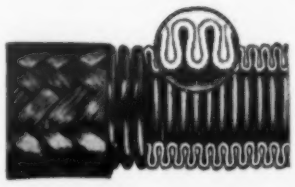
You too may find that FLASH-O-LENS will save inspection time and improve product quality. Battery and plug-in models available — write for literature.

E. W. PIKE & COMPANY

492 NORTH AVE, ELIZABETH, N. J.

For more details circle NED-328 on enclosed inquiry slip

Keep these dangerous stresses out of piping and equipment



- ✓ VIBRATION
- ✓ MISALIGNMENT
- ✓ FLEXATION
- ✓ EXPANSION and CONTRACTION

with CMH FLEXIBLE METAL HOSE

Motion or misalignment in rigid piping presents serious problems to plant operating men. Piping subject to these stresses is in potentially dangerous condition. But in most cases, these problems can be solved economically, dependably and safely by using CMH Flexible Metal Hose.

The CMH Hose Design Guide gives full information—write for your copy, today.

CHICAGO METAL HOSE
DIV. FLEXONICS CORPORATION
13435. Third Avenue, Maywood, Illinois
Manufacturers of flexible metal hose and conduit, expansion joints, metallic bellows and assemblies of these components.
In Canada: Flexonics Corporation of Canada, Ltd., Brampton, Ontario

For more details circle NED-329 on enclosed inquiry slip

FABRICS & TAPES For ALL INDUSTRY

- COTTON
- VINYON
- RAYON
- NYLON
- GLASS

FLIGHTEX FABRICS

If you use special industrial fabrics and mechanical tapes, you'll find Flightex a dependable source of supply. Our staff of engineers is at your service to help solve your fabric and tape problems.

Write for Complete Information

FLIGHTEX FABRICS, Inc.
91 Worth Street New York 13, N. Y.

For more details circle NED-330 on enclosed inquiry slip

20-CYCLE INVERTER unit is hermetically sealed

Code 101-A 20-cycle inverter is a miniaturized, hermetically sealed unit designed to provide 20 cycle per second ringing signals from a direct current source. It incorporates a noise suppression filter and operates over wide range of direct current input from 80 to 140 v. Full output is reached in less than 0.25-second. Inverter meets military and commercial specifications. Made by **Kellogg Switchboard & Supply Co.,** Dept. 59, 6650 S. Cicero Ave., Chicago 38, Ill.

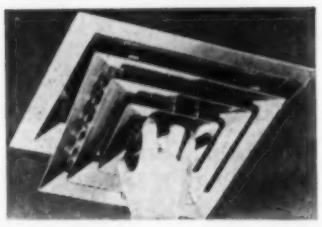
For more details circle NED-331 on enclosed inquiry slip

DEHUMIDIFIER features an automatic control

Automatic control incorporated into this Aqua-Sorber dehumidifier is activated by moisture content of atmosphere and causes unit to operate only when necessary rather than at timed intervals. Other features include maximum air flow, handy on-off switch, easy removal of water container and hose connection accessible for permanent water removal through drain piping. Unit is powered by 1/5-hp motor and is available with or without the automatic control. Made by **Walton Laboratories,** 1184 Grove St., Irvington 11, N. J.

For more details circle NED-332 on enclosed inquiry slip

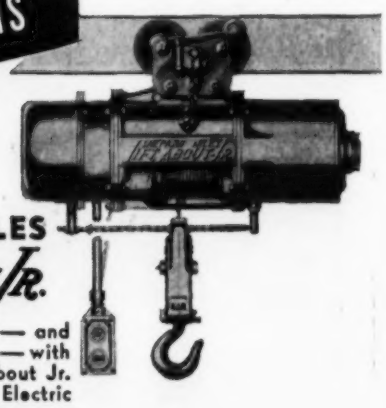
AIR DIFFUSERS mounting frame has removable core



Three new Agitair air diffuser models feature a mounting frame with removable diffuser core for quick and easy installation. To install the model RC, RCDF and RCTC units, mounting frame is first fastened to the duct collar, then the diffuser core is fitted into frame and held by mounting frame lock. The core is easily removed for adjusting. All RC series square and rectangular air diffusers are tailor-made and are available in range of sizes with vanes and louvers assembled to blow in one, two, three or four directions with complete control of air volume. Made by **Air Devices Inc.,** Dept. D, 17 E. 42nd St., New York 17, N. Y.

For more details circle NED-333 on enclosed inquiry slip

SOLVES MANPOWER PROBLEMS



SHEPARD NILES
LIFT ABOUT Jr.

One man replaces many — and moves more goods faster — with the Shepard Niles Lift About Jr. This lightweight, low cost Electric Hoist frees valuable floor space, puts waste ceiling area to work.

Loads of 500 or 1,000 lbs. are handled easily by an older man, woman or youth.

Learn how the Lift About Jr. fits into your production picture by calling in the Shepard Niles representative. He'll make sure you get the right capacity and controls for your handling job. Write today for Bulletin 127 or 171 and ask to have a representative stop by.

Specialists in loads through-the-air since 1903.

SHEPARD NILES
CRANE AND HOIST CORPORATION
1810 SCHUYLER AVE., MONTOUR FALLS, N. Y.

For more details circle NED-334 on enclosed inquiry slip

Let the Figures Prove How Much More You Save With "Keyed-For-the-Job" Automatic Trucks

There's only one RIGHT truck for each material handling job... and Automatic has the experience and know how that saves you money with trucks "Keyed-for-the-Job"

From the smallest to the largest truck ... from the lightest to the heaviest products to be moved, lifted or tiered, expect the *right* truck from Automatic ... an electric truck *"keyed-for-your-job"* and *your job alone!*

Put Automatic electric trucks to work in your plant, and let the figures prove that Automatic Trucks cost so little to operate, so little to maintain. Write for facts on Automatic "Keyed-for-the-job" electric trucks.

Automatic
61 West 87th Street, Dept. P-2
Chicago 20, Illinois

Automatic ELECTRIC TRUCKS
Trade Mark Registered

WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC INDUSTRIAL TRUCKS

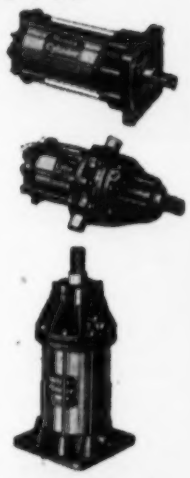
For more details circle NED-335 on enclosed inquiry slip

Hanna Cylinders

... SMOOTH, DEPENDABLE POWER for 1001 APPLICATIONS

Pneumatic and Hydraulic ...

There are standard model Hanna Cylinders for many ideal applications in *your plant* and in the machines and equipment *you* design and build. You'll find that they simplify and improve practically all types of machine control and actuation by eliminating a vast assortment of miscellaneous cams, cranks, screws, levers, etc. Hanna Cylinders operate efficiently and economically to provide the push, pull or lift movements required for the operation.



... High and Low Pressure

Hanna Cylinders are available in a selection of sizes, types and mounting styles to meet your exacting requirements. They are designed for operation by air, oil or water and for pressures up to 1500 psi.

There are thousands of Hanna Cylinders now at work throughout industry providing smooth, economical, dependable power for hundreds of applications. It will pay you to find out how Hanna Cylinders can help improve production and machine operation in your plant.

SEND FOR BULLETIN

The New Bulletin "Cylinder Power in Action" illustrates 16 cylinder powered movements and shows 21 actual application photos. Write for Bulletin 255.

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT . . CYLINDERS . . VALVES . . RIVETERS
1759 Elston Avenue, Chicago 22, Illinois

For more details circle NED-336 on enclosed inquiry slip

NAGLE PUMPS

NAGLE PUMPS, INC.
1265 CENTER AVENUE, CHICAGO HEIGHTS, ILLINOIS

PUMPS FOR ABRASIVE AND CORROSIVE APPLICATIONS

For more details circle NED-337 on enclosed inquiry slip

SAVE TIME CUT COSTS REDUCE INTERFERENCE

with the G-E HEAVY-DUTY CLEANER

G-E Heavy-Duty cleaners are invaluable in industrial cleaning operations. Even inexperienced help can take over with little training – because G-E Industrial cleaners are as easy to operate as home-type vacuums.

These G-E cleaners are compact and portable, weigh only 51 pounds. Their flexibility of use means minimum interference on the job.

Yet these cleaners have full one horse-power vacuum units for fast, thorough pick-up of all litter. Extra wide nozzles scour flat surfaces in a hurry. Other attachments make the inaccessible places easy to reach. It takes only a jiffy to convert to a blower when needed.

The G-E Heavy-Duty cleaner handles wet cleaning just as effectively – needs only the change from filter bag to wet pick-up container to gather up suds, overflow, and other wet mess.

Heavy-Duty Cleaning Equipment

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, Dept. 22-2632
1285 Boston Ave., Bridgeport 2, Conn.
Without obligation, please send complete details on heavy-duty cleaning equipment.

NAME.....

FIRM.....

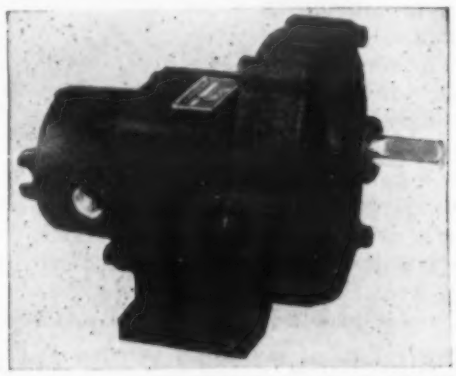
ADDRESS.....

CITY.....ZONE.....STATE.....

For more details circle NED-338 on enclosed inquiry slip

HEAVY DUTY TACHOMETER
for measuring fractional rpm's

Speeds as low as a fraction of a revolution per minute can be measured by series 57M heavy duty tachometer head. For use with tachometer indicators, it

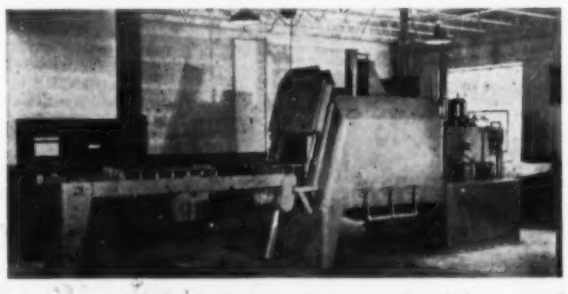


has built-in gearing which permits direct engagement of very low speeds without speed changing drives. Speeds up to 199 rpm for full scale indication can be measured. Overspeeding of 2 to 10 times rated values causes no damage. All working parts are enclosed against dirt, abrasives and splashing liquids. Electrical connections between head and speed indicator can be up to 1000 ft. Performance is stable over wide range of temperature, humidity, vibration or magnetic fields. Made by **Metron Instrument Co.**, 436 Lincoln St., Denver 9, Colo.

For more details circle NED-339 on enclosed inquiry slip

HEAT TREATING UNIT
has automatic sealed atmosphere

Rated at 500 lb per hour capacity, this production heat treating unit features an automatic sealed atmosphere and temperature control from heat through



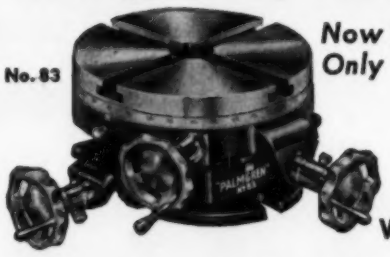
quench. Bright heat treating, carburizing, carbonitriding, martempering and annealing can be performed. Model T-500 unit is either electric or gas fired and automatically transfers work from heat through the quenching. A semiautomatic loader is standard equipment with loading space for two work trays. Quench tank is direct-connected to heating chamber. Power driven endless chains move the work trays and an airdraulic elevator moves work into oil quench. Maximum operating temperature is 1750° F. Made by **Ipsen Industries, Inc.**, S. Main & Ipsen Ave., Rockford, Ill.

For more details circle NED-340 on enclosed inquiry slip

DUAL CROSS and ROTARY FEED

PALMGREN

Rotary, Index, Milling Table



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Now Only $54.50

Turns Your DRILL PRESS Into A VERTICAL MILLER

Think what this will mean in your shop! Can be used on any Drill Press, Lathe or Milling Machine and provides what is practically a universal milling machine.

Designed for use in all types of metal and woodworking shops. A precision table permitting fine work to close tolerances. It is accurate, speedy, well constructed and attaches quickly in a firm position.

Rotary feed calibrated in degrees; Cross feed in thousandths; Dual Cross Slide with cross feed 2 1/8" each side of center or 4 1/4" overall. Has acme thread cross feed screws, adjustable gibs on cross slides. 40 to 1 worm and gear ratio in rotary feed. Equipped with bolt slots and locking screws.

No. 83 Table Dia. 8", T-Slots 1/8", Base Keyway 1/8", Base Dia. 6 1/4", Ht. 5", Wt. 37 lbs. Price Only $54.50. Other Types available, No. 82 Dual Cross Feed only $43.75; No. 86 Rotary Feed Only $46.75.

Order Today! If dealer can't supply, write us. Ask for Circular No. 10

CHICAGO TOOL and ENGINEERING CO.
Mfrs. of PALMGREN PRODUCTS Since 1918
8378 South Chicago Ave. • Chicago 17, Ill.

For more details circle NED-341 on enclosed inquiry slip

Split-second STOPS...

Smooth, Quick STARTS with

STAR-KIMBLE BRAKEMOTORS

Extra-large braking area of Star Brakemotors assures quick stopping, long life. Fast electromagnetic release assures smooth motor starting without drag.

Remember . . . a Star Brakemotor is a compact, integral unit—motor and brake *built* together to *work* together, hour after hour, day after day, in the toughest start-and-stop service.

Want to know how Star Brakemotors work—what torque and motor ratings are available? Write for free Bulletin B-501-A.

STAR-KIMBLE

MOTOR DIVISION OF
MIEHLE PRINTING PRESS & MANUFACTURING CO.
214 Bloomfield Avenue Bloomfield, New Jersey

For more details circle NED-342 on enclosed inquiry slip

A positive seal

for OIL • GAS
FREON • BUTANE
STEAM • WATER

Pipetite provides a positive seal for joints regardless of the type of fluid or gas being used. It is the dependable joint compound that makes good workmanship and assures user satisfaction. To be absolutely sure of "no leaks" use Pipetite. If your supplier does not have it . . . write direct.

LACO BRAND

LAKE CHEMICAL CO.
3050 W. Carroll, Chicago 12, Ill.

For more details circle NED-343 on enclosed inquiry slip

engineering research keeps NATIONAL FIRST in laminated plastics

HOW MUCH SOCK?

How much energy does a specimen of laminated plastic absorb in foot pounds per inch of notch? This impact tester is very important in the production control of National laminated plastics—very important in the research for better, stronger materials.

National Laminated Plastics
nationally known—nationally accepted

NATIONAL VULCANIZED FIBRE — A tough, horn-like material with high dielectric strength. Excellent machinability. Sheets, Rods, Tubes, Special Shapes.

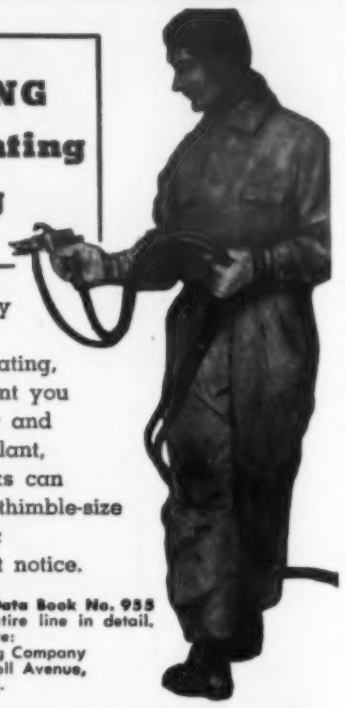
PHENOLITE Laminated PLASTIC — Good electrical insulating material with great mechanical strength; moisture resistant. Sheets, Rods, Tubes, Special Shapes.

NATIONAL VULCANIZED FIBRE CO.

Wilmington, Delaware — Offices in Principal Cities
Since 1873

For more details circle NED-344 on enclosed inquiry slip

EVERYTHING for spray painting and coating



Whether you want to spray a satin furniture finish or a coarse underbody coating, Binks makes the equipment you need to apply it *smoothly* and *evenly*. Wherever your plant, whatever your need, Binks can supply everything from thimble-size fittings to giant automatic finishing systems on short notice.

Send for Catalog-Data Book No. 955
It describes the entire line in detail. No obligation. Write:
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3122-34 West Carroll Avenue,
Chicago 12, Illinois.

Binks EVERYTHING FOR SPRAY PAINTING

GUNS • SPRAY BOOTHS • MATERIAL TANKS • EXTRACTORS & ACCESSORIES

REPRESENTATIVES IN PRINCIPAL U.S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

For more details circle NED-345 on enclosed inquiry slip

Special cold headed products

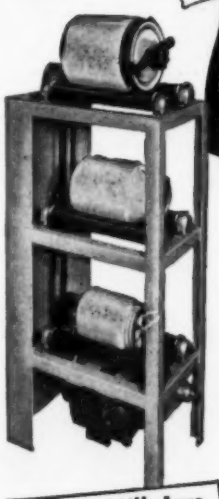
. . . nails • rivets • screws . . . made to order

. . . and to your specifications in any metal. Large raw material inventory for your convenience. Send drawing—advise quantity. *Free catalog on request.*

JOHN HASSALL INC.
398 Oakland Street, Brooklyn 22, New York

For more details circle NED-346 on enclosed inquiry slip

Here's the *Best* in JAR MILLS



The "roller-type" JAR MILL with the patented "non-creep" rolls.

You don't have to continually watch a "U. S." *roller-type* jar mill — the jar stays put without clamping. Special patented rollers prevent jar creep; the jar stays centered.

"U. S." roller-type Jar Mills with the patented non-creep rolls are made in sizes to handle 1 to 24 jars. Adjustable to roll any round container from a pint to 6 gallon capacity.

Roalox Mill Jars

Positive Locking Wide Mouth Chemical Porcelain or stoneware. Quart to 6 gallon capacity.

WRITE FOR CATALOG

U. S. STONEWARE
Akron 9, Ohio

For more details circle NED-347 on enclosed inquiry slip

CONCRETE CUTTER machine is self-propelled and uses diamond cutting blade

A 13½ hp Wisconsin air-cooled engine on the model 252 Di-Met concrete cutting machine drives the diamond abrasive saw blade and furnishes power to the rear wheels, making the unit self-propelled. Speed can be adjusted from a crawl to fast walk. Power drive tends to increase diamond wheel life by eliminating variations in feeding. Cutting wheel is raised and lowered by built-in hydraulic jack, which also expedites coupling the machine to a trailer hitch for towing.

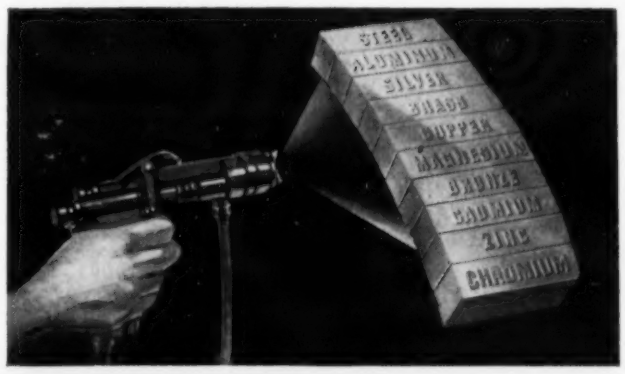
Depth of cut is set by an adjustable stop. Machine can be steered, the rear wheel position locking after establishing line of travel. It uses 10 to 18-in. diameter diamond wheels on either end of the 1¾-in. spindle. The 14 and 18-in. wheel guards are interchangeable for right or left hand use. Either tank or external water sources can be used for cooling wheel. Made by **Felker Mfg. Co.**, 1125 Border St., Torrance, Calif.

For more details circle NED-348 on enclosed inquiry slip

DIAL TEST INDICATOR is both universal and adjustable

One-piece construction of base and shank of this Universal dial test indicator results in an assembly that will not loosen under severe use. Being lightweight, indicator is adaptable for use with height or surface gage in determining surface flatness, alignment, out of roundness, relative heights, locations and other checking functions. Jeweled thrust bearing in simplified mechanism assures smooth operation as well as accuracy and long life. Improved hole attachment screws directly into base, eliminating overhanging or supporting arms. Outside knurled ring (bezel) contains dial and is adjustable so that zero can be set to any position in relation to the pointer. Made by **Lufkin Rule Co.**, Hess St., Saginaw, Mich.

For more details circle NED-349 on enclosed inquiry slip



ADHERES to almost any metal
INVISIBLE on all of them

DULAC CLEAR UNIVERSAL LACQUER #462—
Here is a *single* water-white lacquer with remarkable adhesion to practically *all* metals. Withstands salt spray and weatherometer tests for exceptionally long periods. Resists heat, cold, weather, stain, perspiration. Dries out of dust in 5 to 10 minutes . . . hard in one hour. Applied by spray or dip.

For complete information, write for Technical Data Bulletin #110.

PIONEERS IN PROTECTION — 76th YEAR

MAAS & WALDSTEIN CO. 438 RIVERSIDE AVE. NEWARK 4, N. J.

Midwest Div.: 1658 Carroll Ave., Chicago 12, Ill. • Pacific Coast Div.: Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Cal.

MANUFACTURERS OF INDUSTRIAL FINISHES

For more details circle NED-350 on enclosed inquiry slip

Saw Large Holes thru sheet or plate

MARVEL High-Speed-Edge Hole Saws (with high-speed-steel cutting edge integrally welded to tough alloy steel body) provide fast, economical means of sawing out holes from ⅝" to 4½" diameter through steel up to 1⅛" thickness. Extra cutting quality and high-speed-steel, self-aligning, double drive pin arbors give strength for use on drill presses, lathes and portable tools, greatly increase the hole size capacity of small tools. Last longer and cut faster with safety.

Write for Hole Saw Catalog Sheets.

MARVEL Metal Cutting **SAWS** — Better Machines—Better Blades

ARMSTRONG-BLUM MFG. CO.
"The Hack Saw People"
5700 Bloomingdale Ave. Chicago 39, U.S.A.

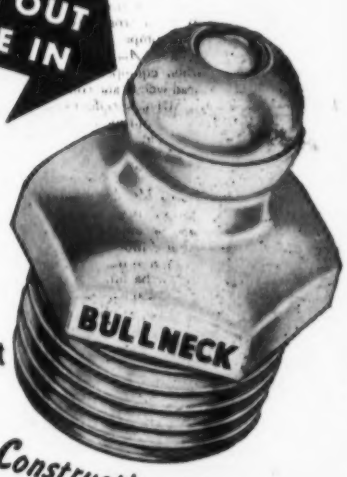
For more details circle NED-351 on enclosed inquiry slip

Lincoln

BULLNECK* FITTINGS

The Only Complete Line of Grease Fittings with THE BALL-IN-THE-HEAD

SEALS DIRT OUT . . . GREASE IN



Throat of Ordinary Hydraulic Fittings Clog with Dirt and Grit

Look at these Construction Features

FOUND ONLY IN LINCOLN BULLNECK* FITTINGS... *AT NO EXTRA COST!*

1. **Flush Ball Check**—Head can be wiped clean without forcing dirt into fitting and into bearing.
2. **Large Grease Passage**—The larger internal diameter permits greater flow of lubricant.
3. **Special Spring Design**—Spring cannot be compressed to restrict flow of the heaviest lubricants.
4. **Sturdier Construction**—Enlarged neck size and projecting locking pad protect against damage and wear.

BULLNECK* FITTINGS Are Available in the Complete Range of Types and Thread Sizes

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DETROIT, MICH. Lincoln Engineering Co. 8627 Woodward Avenue Trinity 5-3484
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MILWAUKEE, WISC. Lincoln Equipment Co. 1618 West Wells Street Division 2-1191
LONG ISLAND, N. Y. Lincoln Lub. Systems, Inc. 48-14 36th Street Ravenswood 9-2529
BERKELEY, CALIF. Lincoln Eng. Co. of Calif. 3033 San Pablo Ashberry 3-6726
PAWTUCKET, R. I. H. G. Davis, Inc. 587 Pawtucket Avenue Pa. 2-7400
PHILADELPHIA, PA. Lincoln Engineering Co. 3117 N. Broad Street Radcliff 5-8900
PITTSBURGH, PA. Lincoln Engineering Co., 134-36 S. Whitfield Montrose 1-1444
PORTLAND, OREGON Pioneer Equipment Co. 1018 S. E. 8th Avenue Empire 0488

• • • PIONEER BUILDERS

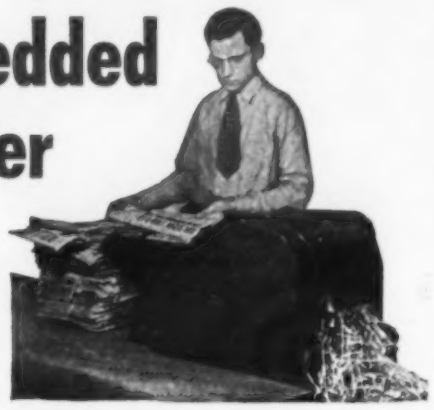
*Tradename Registered

LINCOLN LUBRICATING EQUIPMENT • • •

LINCOLN ENGINEERING CO., 5782 Natural Bridge Ave., St. Louis 20, Mo.

For more details circle NED-352 on enclosed inquiry slip

Shredded Paper



IS THE IDEAL PACKING MATERIAL

produce it yourself for . . .

(1) Real dollar & cents savings
(2) Minimum inventories
(3) Substantial space savings
(4) Dependable supply

Test a "Silver" paper shredder in your own shop without obligation—Get complete details by writing *today* to:

INDUSTRIAL SHREDDER & CUTTER CO.
107 Mill Street Salem, Ohio

▲ For more details circle NED-353 on enclosed inquiry slip ▲

FOR *Strictly* IMPERSONAL INSPECTION CHOOSE AMES DIAL COMPARATORS

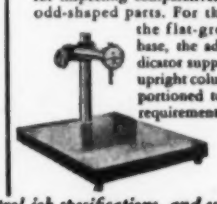
Ames Dial Comparators make the inspection of duplicate parts an extremely simple, rapid and accurate operation. Ames Comparators are strictly impersonal in their accuracy – the results being in no way dependent on the skill or judgment of the operator. The pressure of the gauging members against the work is mechanically determined and therefore uniform.

Check the Ames Dial Comparators shown – one of them may solve a Quality Control problem for you.

Ames No. 1 is an easily adjustable bench model dial comparator that measures objects up to 2" in cross section. This comparator is designated *Ames No. 1W* when equipped with a dead-weight and contact to ASTM specifications for measuring resilient materials.

Ames No. 2 is a compact bench model dial comparator for measuring sheet metal, glass, hard rubber. *Ames No. 2W* is similar, but is furnished with dead-weights and contacts to ASTM specifications for checking textiles, plastics, sheet rubber, etc.

Ames No. 13 features flat-ground, cast-iron base of ample size for using V-blocks and locating fixtures. The No. 13 can be fitted with a fine adjustment for close setting. Adjustable bracket holds any Ames Indicator.



Ames No. 130 is designed especially for inspecting comparatively large and odd-shaped parts. For this reason, the flat-ground steel base, the adjustable indicator support, and the upright column are proportioned to the user's requirements.

Send us your Quality Control job specifications, and we will supply complete details and proposal without obligation.

Representatives in principal cities **B. C. AMES CO.** 54 Ames Street Waltham 54, Mass.
Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

▲ For more details circle NED-354 on enclosed inquiry slip ▲

Don't Handcuff That Engine!

STOP Costly Cylinder Wear with the **UNIVERSAL TOP OILER**

- Reduces Valve and Ring Failures
- Lowers Fuel Octane Requirements
- Reduces Oil and Gas Consumption
- Frees Sticking Valves
- Increases Payload Power

The Universal Top Oiler assures constant, uniform top cylinder lubrication on all types of internal combustion engines by metering vaporized top oil through the intake manifold. When used with an approved upper-cylinder lubricant, it neutralizes corrosive acids, stops carbon and gum formation, prevents dryness in the hottest, busiest part of the engine. Easy to install. List price: $8.95.

Provides maximum benefit when u... continuously with Universal Top-Oil. Write for full details.

Gentlemen:
Please send complete information on the UNIVERSAL TOP OILER and the new Universal Top-Oil.

Name _____

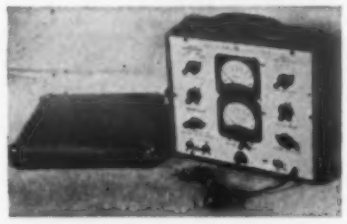
Address _____

City _____

UNIVERSAL LUBRICATING SYSTEMS, INC.
792 ALLEGHENY AVENUE • OAKMONT, PA.

▲ For more details circle NED-355 on enclosed inquiry slip ▲

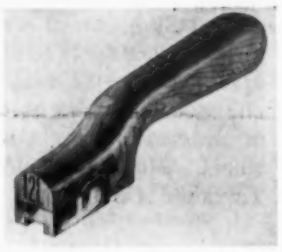
GERMANIUM DIODE CHECKER has wide variety of applications



Checking of germanium diode static characteristics, general resistance checking, forming electrolytic capacitors, seeking direct current leakage current and an accurately metered power supply are potential uses for type ST-12-A diode checker. It accommodates diodes with leads or pins. Circuit prevents instrument damage from short. Diodes can be checked to test limits in both forward and back direction. A 3-in. voltmeter and 3-in. current meter permit metering of both factors at one time. Made by **General Electric Co.**, Dept. N-12, Electronics Park, Syracuse, N. Y.

▲ For more details circle NED-356 on enclosed inquiry slip ▲

SAFETY FILE HANDLE sizes offered to fit all files



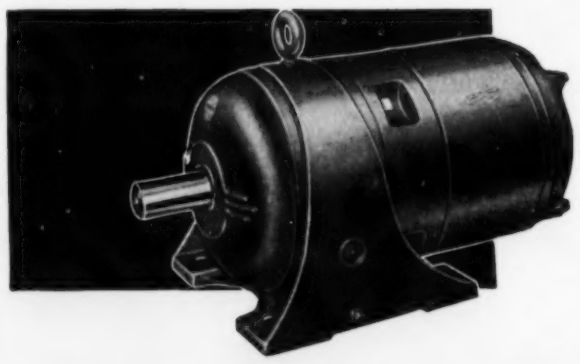
Tang of file is merely driven into soft alloy dovetailed V-blocks of this line of safety file handles to obtain secure grip. Seven sizes with offset straight handles and one model with Over-Tang vertical handle accommodate from 6 to 14-in. mill, flat and half-round files. Handles can be removed for use on other files by driving file off with hammer. List prices range from $1.50 to $1.65. Made by **Remont Mfg. Co.**, 1003 Thirteenth St., Lombard, Ill.

▲ For more details circle NED-357 on enclosed inquiry slip ▲

BINDING POSTS for watertight external connections

Sealed equipment requiring external connections can make use of waterproof binding posts with contact jaws of stainless steel. For use on portable and vehicular equipment, posts have Teflon insulators, rubber washers and optional red or black rubber caps. Heavy spring pressure is provided for good contact on small soft wire or heavy steel and copper conductors. Made by **Hugh H. Eby, Inc.**, 4707 Stenton Ave., Philadelphia 44, Pa.

▲ For more details circle NED-358 on enclosed inquiry slip ▲



FOOTE BROS.-LOUIS ALLIS

Gearmotors

PROMPT DELIVERY! You can count on prompt delivery of Foote Bros.-Louis Allis Gearmotors—the finest Gearmotor obtainable. Superior in design and construction. Available in single, double, and triple reductions to provide output speeds from 780 down to 7.5 r.p.m. Capacities from 1 horsepower through 150 h.p. Available with open, drip-proof, splash-proof, enclosed and explosion-proof motors.

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FOOTE BROS. GEAR AND MACHINE CORPORATION
Dept. NE, 4545 S. Western Blvd. • Chicago 9, Illinois

FOOTE BROS.
Better Power Transmission Through Better Gears

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SPRACO NOZZLES

Write for NOZZLE CATALOG *to*
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

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Unsurpassed for . . . Quality

with **underwriters' acceptance**
dependable service
design and workmanship
choice of materials

*Universally recognized as a definite mark of quality Underwriters' Laboratories, Inc. label of acceptance applies to all applicable products manufactured under the LEVOLIER trade-mark. Even these rigid requirements are exceeded by two to three times with McGill as manufacturing standards of perfection are set at this level. Endurance tests prove that you can rely on McGill product superiority.

Available from your electrical wholesaler

No. 4100 Series Industrial Socket is rated at 660 watts 250 volts. Uses the proven Levolier mechanism with such features as heavier screw shell, cap and casing lock and double wall thickness to withstand pull. Eliminates costly replacement in rugged industrial service. 1/8", 3/8" and pendant cap, brushed brass finish. Write for Catalog No. 49.

Underwriters' Laboratories Inc., Inspected

ONLY McGILL MAKES *Levolier* SWITCHES

McGILL electrical specialties

McGill Manufacturing Co., Inc., 151 N. Campbell St., Valparaiso, Ind.

▲ For more details circle NED-361 on enclosed inquiry slip ▲

- Measures your tape—Saves 10% to 20%.
- Secures top production.
- Insures safe positive sealing.
- Produces perfectly moistened tape at any speed.

FREE! "IDEAL SHIPPING GUIDE"

IDEAL STENCIL MACHINE CO.
134 IOWA AVE., BELLEVILLE, ILL.

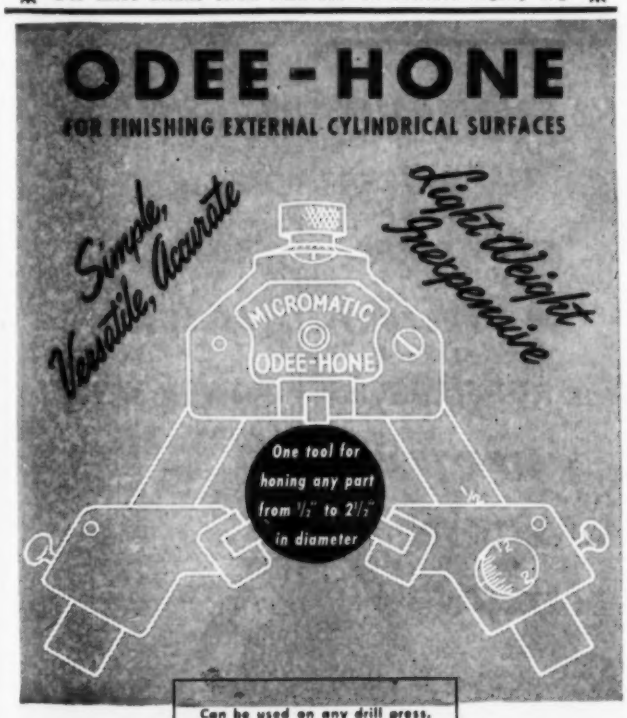
For more details circle NED-362 on enclosed inquiry slip

Ask for this set of four Motch & Merryweather folders. Altogether, they give a pretty complete picture of cut-off blades made for fast, usable production — M & M's well known segmental type, solid blades and slitting and slotting blades. Better still, get the folders from your local Motch & Merryweather dealer.

THE MOTCH & MERRYWEATHER MACHINERY CO.
PENTON BUILDING CLEVELAND 13, OHIO
COMMAND OUR UNPARALLELED EXPERIENCE IN CIRCULAR SAWING . . .

For more details circle NED-363 on enclosed inquiry slip

ODEE-HONE
FOR FINISHING EXTERNAL CYLINDRICAL SURFACES



Can be used on any drill press, lathe or electric drill.

Generates round, straight surfaces with any desired surface finish.

For complete information write or call

MICROMATIC HONE CORPORATION
8100 SCHOOLCRAFT • • • DETROIT 4, MICHIGAN

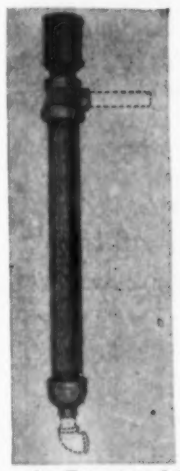
For more details circle NED-364 on enclosed inquiry slip

SMALL ELECTRIC DEODORIZER
destroys odors by oxidation

Plugged into any convenient electric outlet, this Ozone Air Conditioner generates ozone which destroys odors by oxidation. Transformer and ozone bulb are housed in chromium finished case with alternate mirror and satin bands. It is wall-mounted at eye level and has 8-ft cord. Device is offered in one-bulb model for up to 1000-cu ft rooms and in two-bulb type for 1800 cu ft of space. Made by **Bretford Mfg., Inc.**, 9359 Chestnut Ave., Franklin Park, Ill.

For more details circle NED-365 on enclosed inquiry slip

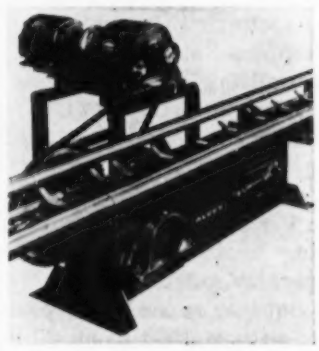
WATER HEATERS
12 different models



Rated from 1000 to 7500 w in 12 different models, series of electric side-arm water heaters is available for 115 and 230-v service. They can be used for original or conversion installations and are adaptable to any size tank and tank opening. High wattages can be utilized in small tanks where direct immersion elements are too large. Copper sheathed elements have an integral thermostat, adjustable from 90 to 190° F. Made by **Electro-Therm Inc.**, 925 Selim Rd., Silver Spring, Md.

For more details circle NED-366 on enclosed inquiry slip

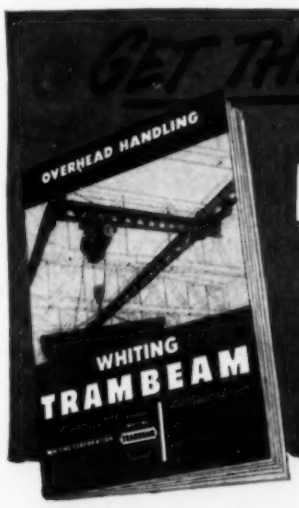
CONVEYOR DRIVE
for carrousel type systems



Heights as low as 21½ in. and elimination of offset chains and deflection from one chain to another are features of tractor drive for carrousel type conveyors. Unit consists of head and take-up sprocket driving a short pitch roller chain that allows drive to be as low as 21½ in. from floor to top of roller chain. Conveyor chain is engaged at the take-up end and released shortly before the tractor chain reaches the head sprocket. Drive operates smoothly at normal conveyor speeds and can accommodate a 5-hp motor. Made by **Alvey Conveyor Mfg. Co.**, 9259 Olive Street Rd., St. Louis 24, Mo.

For more details circle NED-367 on enclosed inquiry slip

GET THIS BOOK ON



ENGINEERED OVERHEAD HANDLING

This booklet is the first step to fast, flexible materials handling. It tells all about Whiting Trambeam Systems . . . the sure way to increase plant capacity, step-up production, save space, manpower and money! Write today and ask for Bulletin M-20.

WHITING CORPORATION
15660 Lathrop Avenue • Harvey, Illinois

WHITING TRAMBEAM® Overhead Handling Systems

For more details circle NED-368 on enclosed inquiry slip

"YANKEE" offset kit No. 3600-9 Drives

Hollow head set screws and socket head cap screws

Popular "Yankee" Offset Ratchet Handle No. 3600 with eight hex key adapters from 3/64" to 5/16". Packed in transparent plastic case. Strong "Yankee" ratchet drives or draws 21 sizes of hollow set screws and socket head cap screws, even in extremely close quarters. Ask for No. 3600-9 "Yankee" Offset Kit. Additional adapters available for slotted screws and Phillips recessed head screws. Other "Yankee" Offset Screw Drivers you'll find useful are—Nos. 3400 and 3800 for slotted screws; Nos. 3412 and 3423 for Phillips recessed head screws. Available from your distributor. For circular, write North Bros. Mfg. Co., 205 West Lehigh Ave., Philadelphia 33, Pa.

"YANKEE" TOOLS NOW PART OF STANLEY THE TOOL BOX OF THE WORLD

NORTH BROS. MFG. CO. • PHILADELPHIA 33, PA.

For more details circle NED-369 on enclosed inquiry slip

ENGRAVE

PANELS OF ANY DIMENSIONS IN YOUR OWN SHOP WITH THE Engravograph

Portable Model I-S

The only portable machine which reproduces 15 sizes from one master alphabet.

The only one with adjustable copy holding slides for multiline engraving in one set-up.

Self-centering holding vise for nameplates.

Send for Booklets
I-S—26 portable model • H—26 heavy duty model

NEW HERMES, Inc. 13-19 University Place, N.Y. 3
In Canada: 359 St. James St., Montreal
World's Largest Manufacturer of Portable Engraving Machines

For more details circle NED-370 on enclosed inquiry slip

AJUSTRITE
TRADE MARK

AUTOMATIC ADJUSTABLE STOOLS

RSS Models

Ajustrite (formerly Kewaunee) adjustable stools and chairs are used extensively in Factories, Laboratories, Hospitals, Offices, Schools, Colleges and Government Agencies. User adjusts to any desired height—instantly.

Choice of 7 models. Height adjustment 15" to 20"; 18" to 26"; 24" to 35". May be equipped with adjustable back rest, foot rest, seat cushion.

Write for literature and free trial offer.

AJUSTO EQUIPMENT CO.
2144 Madison Avenue Toledo 2, Ohio

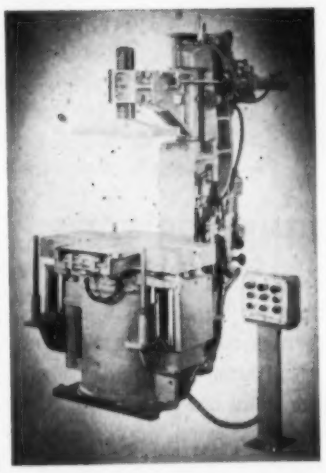
For more details circle NED-371 on enclosed inquiry slip

HEAVY DUTY SHELVING
angle iron reinforce sides, center

Line of Iron Grip shelving is designed to hold up to 2000 lb on each shelf. Reinforced sides and center of shelves are equipped with 1 x 1-in. high carbon angle irons, 1/8-in. thick. Front and rear have U-shaped reinforcing channels which are stronger than the angles. Stud slips into hole in shelf and then into keyhole in upright. Shelf is pressed down and assembly is complete. Slope in stud combines with slope in keyhole to form tight grip. Nuts, bolts or tools are not needed for shelf adjustment which can be done instantly on 1½-in. centers. All openings are 100 per cent adjustable from front of units. Dividers, drawers, backs and side panels are available in all sizes. Made by **Aurora Equipment Co.**, Equipto Div., 690 Prairie St., Aurora, Ill.

For more details circle NED-373 on enclosed inquiry slip

JOLT-SQUEEZE-STRIP/DRAW MACHINE
features powered swing-head and both up-draw and down-draw action



Pushbutton type electrical controls govern all operations and provide for either fully automatic or selective manual control on model 2160-C jolt-squeeze-strip/draw machine for high production of uniform standard molds. Only two buttons are pressed to actuate complete molding cycle, permitting operator to perform other work while machine is operating. All operations are controlled by solenoid valves. Jolting action is timer-controlled, and squeeze is regulated by pressure switch. Stripping is also automatic to eliminate dependence on operator judgment.

Squeeze capacity of machine is 16,000 lb, and jolt capacity is 1500 lb on 80 psi line pressure. Pattern draw is 10 in., and maximum squeeze stroke is 12 in. Flask space ranges from 19 to 31 in., left to right, and 16 to 31 in., front to back. Machine has SPO air vibrator, automatic air line lubricator, inverted jolt mechanism and requires only attachment to air lines for operation. Made by **SPO Inc.**, 6474 Grand Division Ave., Cleveland 25, O.

For more details circle NED-374 on enclosed inquiry slip

Reduce the High Costs of *Eye Accidents*

Use WATCHEMOKET eye SAVERS

The success of your safety program depends on workers actually wearing their goggles. All-plastic Eye-Savers can help you get the worker cooperation you need. Their comfortable fit, good looks and great impact resistance make them popular with workers everywhere. Available from your safety supplier in many different models to meet all eye hazards. Model 1N (square shape shown above) features wide angle vision and maximum ventilation.

FREE! *Send for magazine article giving impartial advice on best uses of plastic eye protection. Eye-Savers catalog also included.*

WATCHEMOKET OPTICAL CO., INC.
DEPT. 7, PROVIDENCE, RHODE ISLAND
Producers & Originators of Practical Plastic Eye Protection

For more details circle NED-376 on enclosed inquiry slip

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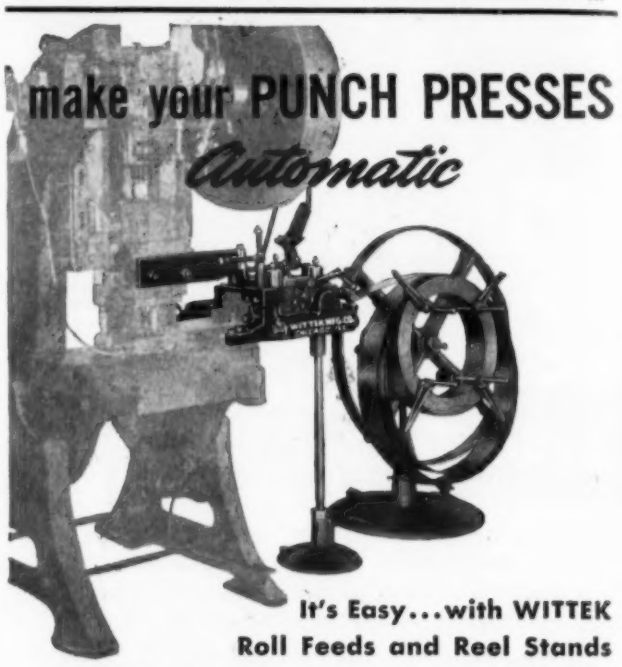
make your PUNCH PRESSES *Automatic*



It's Easy...with WITTEK Roll Feeds and Reel Stands

Wittek Roll Feeds handle any type of coiled strip stock and are made in single roll, double roll, and compound types with straighteners, in models to feed in any of four directions. They are reliable and accurate with simple, quick adjustment of feed length. Standard sizes and models meet a wide variety of press size and capacity conditions.

Wittek Reel Stands facilitate handling coiled stock.

Write for full particulars

WITTEK Manufacturing Co.
4325 W. 24th Place, Chicago 23, Illinois

Automatic ROLL FEEDS AND REEL STANDS

For more details circle NED-377 on enclosed inquiry slip

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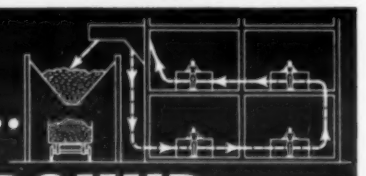
upstairs... downstairs...



ALL AROUND YOUR PLANT— *Hapman* TUBULAR CONVEYORS

can carry flowable materials at tremendous savings!

IF YOU HANDLE flowable materials similar to *any* of these **PRODUCTS:**

Bulk Chemicals: (Wet dry, abrasive, corrosive, radioactive)

Food: Starch, flour, malt, grain, coffee or **BY-PRODUCTS:**

Metal Chips from machine tools...

Sludge from quench tanks or grinding wheels...

Coal or clay, etc.

YOU MAY REAP ENORMOUS SAVINGS—some of America's most cost-conscious firms are doing it—with plant-wide systems of Hapman Tubular Conveyors. The list of materials you can handle is almost endless. You gain great advantages, both mechanically and in terms of labor saved. The stakes are high—why not investigate now? Write today for Bulletin ND-952

Hapman CONVEYORS, INC.
DIVISION HAPMAN-DUTTON COMPANY
KALAMAZOO MICHIGAN

For more details circle NED-372 on enclosed inquiry slip

BROOKS SINCE 1876 *Corrects all*

WATER PROBLEMS

IN YOUR PLANT OPERATIONS ECONOMICALLY
FROM RAW WATER COMING IN— TO WASTE WATER GOING OUT

✓ Boiler Water Treatments ✓ Water Line Treatments ✓ Cooling Water System Treatments ✓ Brine System Treatments ✓ Waste Water Treatments ✓ Zeolite Softener Treatments ✓ Consulting Service

Brooks Service Engineers are available anytime, anywhere for consultation, without obligation. They can help you reduce costs and improve efficiency. Call Brooks!

Write for Descriptive Technical Data

BROOKS *Chemicals, Incorporated*
3304 East 87th St. Cleveland, Ohio
Plants at CLEVELAND, OHIO and HAMILTON, ONTARIO
Offices in Principal Industrial Cities
QUALITY SERVICE THROUGH SCIENTIFIC RESEARCH

For more details circle NED-375 on enclosed inquiry slip

BROWNHOIST BETTER
● **BUY DIRECT FACTORY**
● **ROPE REEVE, LINK TYPE**
● **WRITE FOR CATALOG**

BUILDS BUCKETS FROM FOR LESS POWER WHEEL

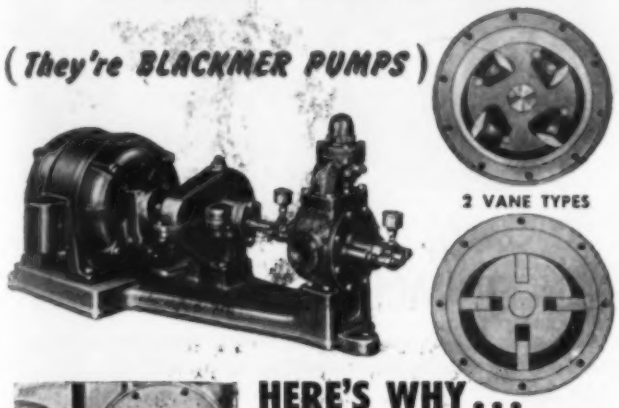
INDUSTRIAL BROWNHOIST CORP.
BAY CITY, MICHIGAN

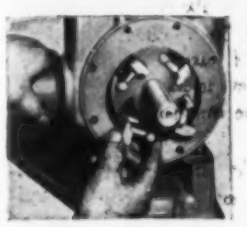
156

For more details circle NED-378 on enclosed inquiry slip

YOU NEVER SCRAP PUMPS LIKE THESE!

(They're BLACKMER PUMPS)





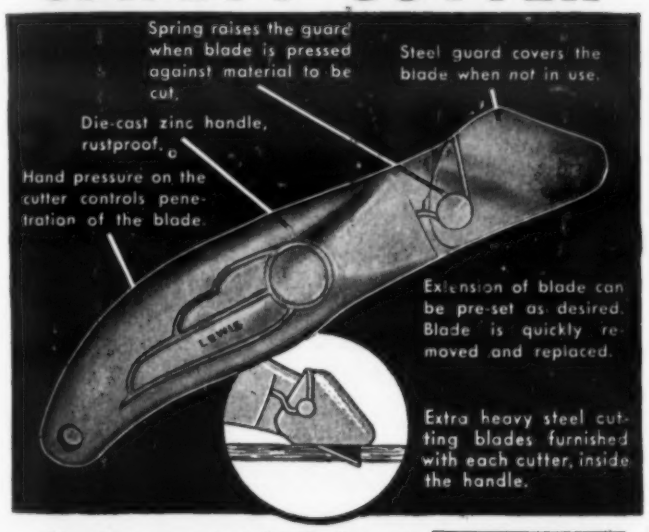
HERE'S WHY...
Blackmer Rotary Pumps are self-adjusting for wear. When finally worn out, change the vanes, like changing blades in a razor, and you save the cost of a new pump.

Learn how Blackmer's two vane types offer the most efficient pump for your specific applications. Write for Folder "G-1-A" . . .

BLACKMER PUMP CO., GRAND RAPIDS, MICH.

For more details circle NED-379 on enclosed inquiry slip

LEWIS Automatic SAFETY CUTTER



Here is a new patented knife that cuts swiftly, surely, safely . . . yet protects the user from injury. Always safe because the blade is guarded — always ready to use because there's nothing to adjust.

Retail Price $1.50

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

For more details circle NED-380 on enclosed inquiry slip

Work EASIER — FASTER with Mall "Mighty Midget" PNEUMATIC DRILLS

Lighter — Smaller — More Powerful Than Any Similar Type Tools . . .

You can't beat the handling ease of a Mall "Midget" Pneumatic Drill . . . Weighs less than a pound in your hand — with lever or button throttle for added convenience. Attachments for wire brushing, grinding, rotary filing, sawing and sanding fit directly into chuck. Equipped with latest type "noise silencer" for quiet operation. Drills come with Kett 3-Jaw chuck spanner and open-end wrench, lubricant, and ¼" x 8' air hose. *Send for Descriptive Bulletins.*

40 Factory-Owned Warehouses, Coast to Coast, To Serve Our Customers And Thousands of Dealers.

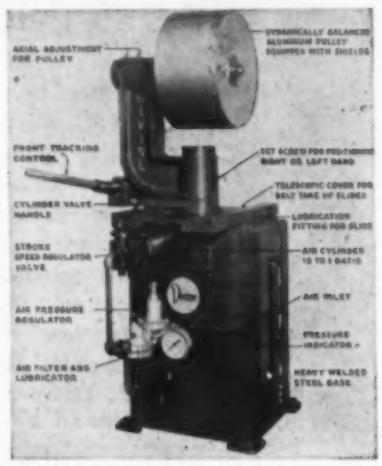
Model PD-103L Pneumatic Drill —Weight 14 Oz.

Model PD-204L ¼" Pneumatic Drill — Weight 2 Lbs.

Mall MALL TOOL COMPANY
7727 S. Chicago Avenue • Chicago 19, Illinois

For more details circle NED-381 on enclosed inquiry slip

ABRASIVE BELT BACKSTAND production type machine features automatic air tension control



Usable with medium and heavy duty lathes, model DBA Tensionair backstand is production unit for abrasive belt machining and finishing. Polishing, grinding and deburring operations can be performed with abrasive belts up to 6 in. wide and of any desired length.

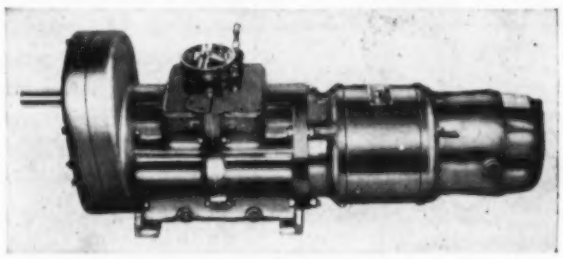
To obtain and maintain any desired belt tension, it is only necessary to set the pressure regulator at the proper point. The automatic air tension control does the rest. If the belt stretches, control compensates for added length immediately. It is thus possible to select tension of abrasive belt best suited to work. Constant, uniform tension further protects belt from damage. Changing of belts is accomplished quickly by actuating lever which releases tension.

Unit is designed to permit belt tracking from either front or rear. Air requirement can be supplied by ¼-hp compressor, and tension of 1000 lb is obtainable with 100 psi air. Made by **Divine Brothers Co.**, 201 Seward Ave., Utica 1, N. Y.

For more details circle NED-382 on enclosed inquiry slip

VARIABLE SPEED TRANSMISSION offered with built-in brake motor

Brake motor built in Graham variable speed transmissions from ¼ to 3 hp provides for immediate stops required in indexing and positioning work. Wide



range of controls, including micrometer, lever and remote electrical, is offered. Complete assembly of transmission, built-in motor with or without brake, built-in reducer and control mounts with four bolts. Brake is of direct-acting disk type. Motor and brake are connected in parallel. Stopping the motor de-energizes the magnet coils, allowing spring tension to apply firm pressure to disks to stop the load. Made by **Graham Transmissions Inc.**, 3753 N. Holton St., Milwaukee 12, Wis.

For more details circle NED-383 on enclosed inquiry slip

SYNTHETIC SAPPHIRE *for*

Resistance to Wear
Outlasting hardened steel and cemented carbides up to 5,000 times.

Resistance to Friction
Affording very low friction characteristics due to hardness and surface continuity.

Resistance to Heat Distortion
Retention of form at temperatures up to 1,000° C.

Retention of Insulating Properties
Excellent dielectric properties over a wide range of temperatures.

Synthetic Sapphire can be polished by flame or diamond polishing; it can be formed and bent by flame. Polished sapphire surfaces keep free of dirt, lint, and in many anti-friction applications, need not be lubricated.

Call or write the LINDE office nearest you for a copy of the booklet, "LINDE Synthetic Crystals For Industry". Ask for Form 7560.

LINDE AIR PRODUCTS COMPANY
A DIVISION OF UNION CARBIDE AND CARBON CORPORATION
30 East 42nd St., New York 17, N. Y. UCC Offices in Other Principal Cities
In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto

For more details circle NED-384 on enclosed inquiry slip

Puts Small Parts Shaping On A Truly Efficient Basis

Atlas

7" SHAPER

Are you shaping small parts on a big machine? The Atlas saves set-up time, and power — machines to close tolerances — and releases your big equipment for the work it's best suited to handle.

The Atlas is the only 7" shaper that is *Timken bearing equipped* — the only 7" shaper with *roller bearings on countershaft spindle, cast iron hull gear with 1" face,* and provision for *outside* stroke adjustment. Built exceptionally heavy and rugged. Has ground ways, 4 speeds, 5 reversible automatic power cross feeds. These are just the highlights of this fine shaper. Send for the catalog with full details.

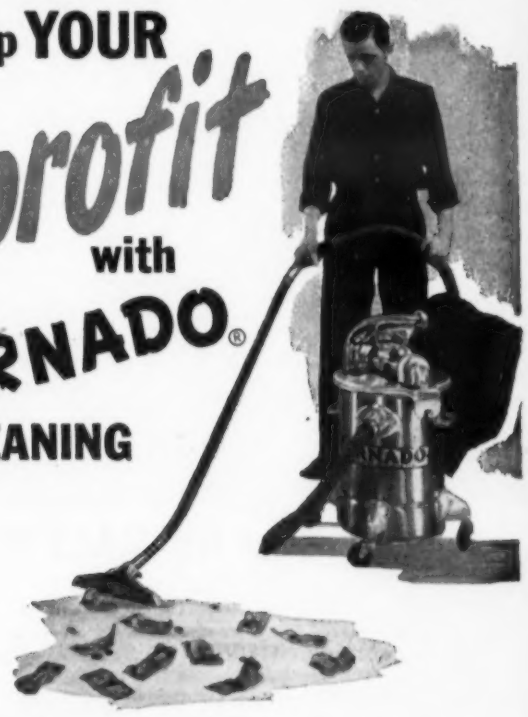
SEND FOR FREE CATALOG

ATLAS PRESS COMPANY
915 NORTH PITCHER STREET
KALAMAZOO, MICHIGAN

Atlas DEPENDABLE QUALITY TOOLS SINCE 1911

For more details circle NED-385 on enclosed inquiry slip

pick up YOUR *profit* with TORNADO® CLEANING



Motor unit removes to become portable blower for cleaning electric motors and machinery.

Motor unit plus Pac-Vac attachments makes your Tornado into a shoulder-type vacuum for stairs and overhead work.

No, we don't mean that someone has been sprinkling your floors with cash. It's nothing as obvious as that—we mean that you may be wasting many dollars on your floors and other cleaning operations if you are not using *Tornado Cleaning.*

Tornado vacuum cleaners have been helping industrial plants and commercial establishments to do their cleaning faster, more thorough and at a substantial savings.

In addition to conventional vacuuming of all floors, Tornado picks up metal chips, water, oil and scrubbing solutions. Versatile attachments clean walls, acoustical ceilings, overhead fixtures and shop equipment. The motor unit is also removable for a shoulder-type vacuum or a portable high velocity blower.

Actually—Tornado is 4 valuable cleaning tools in one powerful machine that means savings —plus profits to you. It's all described in our bulletin 600, yours for the asking.

BREUER ELECTRIC MFG. CO.
5116 N. RAVENSWOOD AVE., CHICAGO 40, ILLINOIS

For more details circle NED-386 on enclosed inquiry slip

FINGERS *must be saved-* **KEEP THEM OUT OF PRESSES** *with*

LITTELL *Pres-Vac*

30 Pres-Vacs cost less than the average cost of only one press accident.

Operated by Compressed Air

SAFETY FEEDERS

- Blanks are fed from a distance of 14 inches
- Eliminates need of putting fingers under press ram

▶ **BOOST PRODUCTION 20% TO 100%** — *Reported by users*

▶ **ELIMINATE DIE BREAKAGE** — *Assures Feeding Blanks One at a Time*

▶ **CUT INSURANCE COSTS** — *Fewer Accidents Mean Lower Premiums.*

Littell Pres-Vac Safety Feeders are made in Single and Multiple types in a variety of cup sizes and styles.

F. J. Littell MACHINE CO. AIR DIVISION
4169 RAVENSWOOD AVE., CHICAGO 13, ILL.
— District Offices: Detroit and Cleveland —

▲ For more details circle NED-387 on enclosed inquiry slip ▲

Put Wiring Anywhere SAFELY

with NE RACEWAYS

Where do you need a wire? Across the ceiling . . . down the wall . . . over the floor? Put it there! It's so easy with NE all-metal Surface Raceways. Simply attach the base, lay-in the wires, snap on the capping. No fishing necessary.

Neat, strong, safe and permanent, NE Surface Raceways are inter-connectable to serve every electrical application of 15 to 60 ampere loads. Easy to install . . . easy to change. For offices, stores, institutions and industrial buildings.

XTENSIONDUCT—The quick way to run wires to new outlets . . . to switches . . . to lighting fixtures.

METAL MOLDING—Carries up to 10 conductors. Bends around offsets and columns.

FLORDUCT—For telephone, power and light. Will withstand truck abuse . . . bump-proof . . . mop-proof.

SURFACEDUCT—A complete wiring system providing all types of service up to 60 amperes.

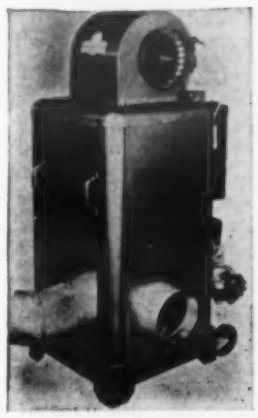
Listed by Underwriters' Laboratories, Inc.
Write for complete details.

EVERYTHING IN WIRING POINTS TO

National Electric Products
PITTSBURGH, PA.
3 Plants . 6 Warehouses . 42 Sales Offices

▲ For more details circle NED-388 on enclosed inquiry slip ▲

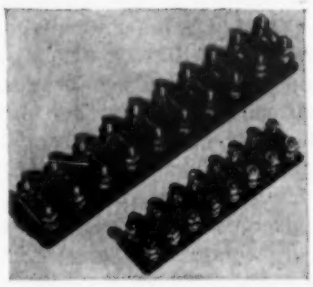
HEAT MACHINE ADAPTER PANELS
allow operation with warm air ducts



Heavy sheet steel side adapter panels with flanged openings are designed for use with model PW-189 Fageol heat machine to permit its operation with warm air ducts. Addition of ducts allows application of heat machines where concentration of intense heat on one spot or transfer of heat for substantial distances is required. Panels can be installed in few minutes. Made by **Fageol Heat Machine Co.,** 5725-N Mt. Elliott Ave., Detroit 11, Mich.

▲ For more details circle NED-389 on enclosed inquiry slip ▲

UNIVERSAL TERMINAL STRIPS
ten units molded in single piece



Large type 2500 and smaller type 1500 terminal strips are one-piece molded Bakelite. Sliding link permits circuits to be opened and closed for testing without disturbing any connected wire. These sliding links are flanged to lock the nuts in place and prevent their turning or contacting adjacent circuits. Silicon bronze screws are standard. Made by **Brach Mfg. Corp.,** Dept. B, 200 Central Ave., Newark, N. J.

▲ For more details circle NED-390 on enclosed inquiry slip ▲

TACHOMETER KITS
guard against machine breakdowns

All components needed to provide instantaneous and permanent records of machine performance at a central location are contained in each of four tachometer kits. Typical installation includes direct current generator, indicator, switchboard-type recorder and, where continuous web of material is produced, a web-break detector. Audible or visible alarm systems are optional. Equipment, which automatically shuts down machinery in case of breakdowns, is suited for paper, textile, rubber, glass, steel and aluminum rolling and other continuous process industries. Offered by **General Electric Co.,** Schenectady 5, N. Y.

▲ For more details circle NED-391 on enclosed inquiry slip ▲

"Any Way You Figure"

Up to 50% Faster Baking

Despatch OVENS

There's a Despatch Finish Baking Oven to meet the needs of both large factories and small shops. Wide range of uses includes aging, preheating, drying and curing. Ideal for baking insulating varnish on armatures . . . film surfaces of lacquer and enamel . . . wrinkle finishes on metal parts . . . hundreds of other baking operations. 12 to 240 cu. ft. capacities.

- Fast finish baking of mass production parts, or for repair service . . .
- Vertical and horizontal forced air circulation prevents over or under baking . . .
- Gas or electric operated . . . wide range of sizes . . . factory tested . . . shipped assembled . . ready for operation.

Write for Bulletins on RS Ovens and Trucks

Manufacturers of ovens for paint finishing . . dehydrating . curing . . all industrial and laboratory applications.

DESPATCH OVEN CO. Established in 1902

325 DESPATCH BUILDING
MINNEAPOLIS 14, MINNESOTA

▲ For more details circle NED-392 on enclosed inquiry slip ▲

MOVING LIQUIDS *with* **SPENCER VACUUM**

Vacuum pulls liquids uphill—from floors, sump tanks, electrical ducts, pontoons, any height up to six feet.

Any Spencer vacuum cleaner can be used for this purpose, but where large volumes of liquid are to be moved an additional wet separator is recommended. The Spencer Sump-Vac, for instance, is a complete unit which holds 125 gallons of liquid.

In more than 100 ways, sanitation and cleanliness are by-products of the savings in cost of production, when Spencer Vacuum is used. 132 applications are described in Bulletin No. 144.

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER HARTFORD

439-L

▲ For more details circle NED-393 on enclosed inquiry slip ▲

BRUTEX
PENCIL TRACING CLOTH

White . . . Moisture-Resistant!

This new, white Bruning pencil tracing cloth lets you draw better and faster than ever before, gives you an improved drawing surface with unsurpassed *permanent* translucency for top-notch reproductions.

Here are the six reasons Brutex does a better job: 1. The super-velvet matte surface is exactly *right* for pencils of even the harder grades. 2. Translucency is clear and uniform. 3. Repeated erasures do not affect the surface. 4. It's moisture-resistant. 5. Brutex won't discolor or become brittle. 6. All qualities are *permanent!*

Get free booklet from CHARLES BRUNING CO., INC., Department C92, Teterboro, N. J.

BRUNING
Everything for the Engineer and Draftsman

▲ For more details circle NED-394 on enclosed inquiry slip ▲

Reported by Users of
STANDARD PNEUMATIC TUBE SYSTEMS

Safe — swift delivery by "AIR" of messages . . . money . . . merchandise!

Savings as high as $10,000 in 9 months' time are reported by users of Standard Pneumatic Tube Systems — filling orders, moving merchandise, money, messages, records, between departments. Reduce messenger and telephone service. Can be installed for a wide range of needs in stores, warehouses, manufacturing plants, offices. Write for Bulletin No. 11 and complete information — address Dept. NED-92.

STANDARD CONVEYOR CO.
North St. Paul 9, Minn.

Write for Bulletin No. 11 — Standard Pneumatic Tube Systems. Address Dept. NED-92.

Standard GRAVITY & POWER CONVEYORS

▲ For more details circle NED-395 on enclosed inquiry slip ▲

Solve YOUR LAMINATED PLASTICS PROBLEMS AS EASY AS . . . 1 2 3

It's as easy as that when you rely on Taylor *full-line* Service. Here's why:

1. If your problem demands *vulcanized fibre* that is tough, high in dielectric strength and light in weight, you can solve it with Taylor Vulcanized Fibre in sheets, rods, strips, or coils.

2. If your problem calls for *phenol fibre* or *glass melamine* and *silicone laminates*, to meet specific characteristics, you'll find the material you need in our wide range of grades, available in sheets, tubes, rods and strips.

3. If you are looking for a supply source for parts fabricated to your specifications, Taylor Fabricating Service can turn out precision-parts on time ready for your production line.

Want to check Taylor Laminated Plastics and Vulcanized Fibre with corresponding government grade designations? Write for Data Sheet ND9.

Taylor

TAYLOR FIBRE CO.
NORRISTOWN, PENNSYLVANIA
LA VERNE, CALIFORNIA
Offices in Principal Cities

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Nothing else like it! A precision optical measuring instrument for fast, accurate inspection of small dimensions. Save time and money measuring wear on cutting tools, checking forms and dimensions of punches, dies and gauges—as well as radii, angles, chamfers, threads and small holes on production parts.

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NATIONAL TOOL CO.
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AUTOMATIC SPRINKLER HEAD
sensitive to rated temperature

Utilizing a solid organic chemical as its fusible element, the Saveall automatic sprinkler head for fire protection is very sensitive and opens at a temperature very close to its rating. Because the chemical is a solid, different compounds can be produced, each with an unchanging fusing temperature. Corrosion resistant sprinklers are made with temperature ratings of 135, 160, 212, 280, 340 and 415° F. When the fusible element changes to a liquid, the sprinkler operates. Made by **Globe Automatic Sprinkler Co.**, Room 515, 1900 Euclid Ave., Cleveland 15, O.

For more details circle NED-399 on enclosed inquiry slip

MAGNETIC DOOR LATCH
even holds warped or sagging doors

Cabinet doors open and close easily due to spring action of striker plate of this magnetic door latch. When door is opened, phosphor bronze spring on which striker plate is mounted tips it slightly away from magnetic pull of catch. Spring action also absorbs any closing impact. Sagged or warped doors are kept firmly closed by 4-lb pull of the Alnico permanent magnet. Only four screws are required for installation. Distributed by **Heppner Sales Co.**, Highway 120, Round Lake, Ill.

For more details circle NED-400 on enclosed inquiry slip

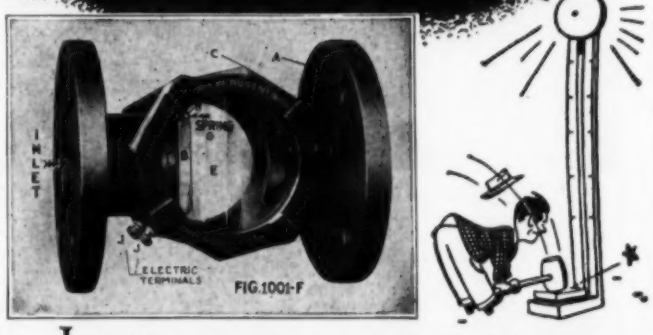
EXTENSION CHUCK
facilitates replacing broken drills

Series of Little Beaver extension chucks for holding drills of various sizes are interchangeable for use on one extension rod. Chuck minimizes soldering, braz-

ing and purchase of special length drills. Regular shank drills can be inserted from rear of chuck when drill breaks. Chuck includes tubular member having centrally disposed bore of larger diameter than drill. Bore is threaded at one end for receiving twist drill lock alignment set screw and threaded portion of extension rod. Other end has inward projections which engage in flutes of twist drill, transferring driving motion to this point. Made by **Ritmar Co.**, Dept. NED-81, 183 New York Ave., Huntington, N. Y.

For more details circle NED-401 on enclosed inquiry slip

NUGENT SIGHT FLOW INDICATORS
RING THE BELL --



INSTALL a Nugent alarm type sight flow indicator on your machinery oiling system and put an end to lubricating worries. Here's the sight flow that tells you, by ringing an alarm bell, when oil is not getting to bearings. Fig. 1001 F. illustrated here can be wired to any spot in your plant. When oil is flowing properly indicator "B" is open. Interruptions cause "B" to close, make contact with terminals "J" and sound the alarm. This enables you to correct troubles quickly, protect valuable machinery and save on costly down time. Write for full details. Sizes from ½" to 6". Tapped or flanged connections. Removable windows. Can be installed right or left hand or vertically.

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Oil Filters, Oiling and Filtering Systems, Telescopic Oilers, Oiling Devices, Sight Feed Valves, Flow Indicators . . . Representatives in Principal Cities

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40 Stock Sizes.
Tuck end tough kraft.
Stocked for immediate shipments.
Sizes range from 1/2 x 1-7/16 inches square to 2 x 7-1/4 inches.
Special cartons, plain or printed, made to your specifications.

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Tags in all grades and colors to your order, printed, numbered, or plain.

Campbell BOX AND TAG CO.
Main & Equipment St.
South Bend 23, Indiana

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MONARCH
Mono-Cushions ®

It's a burly cushion tire made of tough, wear-resistant stock—all the way through. When you need a high capacity for absorbing shock and shock load Mono-Cushions are your best buy—even more desirable where loads are fragile and floor surfaces are rough.

The leading manufacturers of materials handling vehicles use Monarch Tires as original equipment. The manufacturer of your vehicles can supply you, through his distributors, with Monarch Tires engineered for your application.

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▲ For more details circle **NED-405** on enclosed inquiry slip ▲

New Jacques, Jr. CUTTERS

Speed Production!
Make Cleaner Cuts!

TABLE MODEL
featuring automatic material-holder.

Ideal for cutting paper, plastics, rubber, fabrics and other light materials

Now, at low cost, you can increase cutting efficiency and production. Jacques, Jr. all-metal cutters are designed for cutting jobs which do not require large heavy-duty cutters — yet *do* require more ruggedness, speed, and accuracy than are found in ordinary light paper cutters.

Jacques, Jr. construction features add speed and efficiency to your cutting operations. Exclusive automatic material-holder (self-adjusting clamp) automatically comes down, as blade is lowered, to hold material to be cut. Adjustable gauge and steel rule (on table model) assure accurate cuts. Other features include high grade steel blades, spring tension cutting, and safety spring on blade handle (to prevent accidental cutting). Sturdy, all-metal construction stands up under continuous use.

BENCH MODEL

Attaches to your own bench. Cuts materials from continuous rolls or long strips. Perfect for many in-line production operations.

AVAILABLE IN TWO MODEL TYPES
Table model comes in 12", 16", 20", 24" and 30" sizes. Bench model (for your own bench) available in 24", 30" and 36" sizes.

Investigate the advantages of Jacques, Jr. cutters now! Write for descriptive circular giving complete information!

There's a Jacques shear or cutter for your every cutting need!

Let us know your cutting requirements and problems. We'll recommend the shear best suited for your use. Write for descriptive catalog page on each machine.

UNIVERSAL SHEAR
Cuts material quickly into clean, uniform strips—⅛" to 20" in width. (Six sizes available)

BENCH SHEAR
Cuts widths up to 10 ft. on your own bench. Extremely versatile! (Twelve sizes available)

POWER SHEAR
For intermittent or continuous cutting, up to 70 strokes per min. Adaptable for *any* production set-up.

OTHER SHEARS
- J-L Shear (lighter, less expensive adaptation of Universal Shear)
- Card Cutter (small, compact cutter)
- Bookbinder's Shear (for specific applications)

For faster, cleaner cutting through the years, specify only genuine Hobbs replacement blades, accessories, and repair parts.

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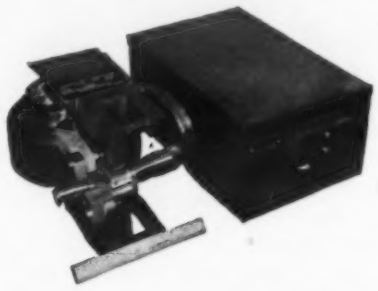
Producers of Modern Machinery for Modern Industry
Jacques Hand and Power Shears, Slitters and Rewinders, Hobbs Autotronic and Tri-Power Die Presses, Paper Box Machinery and Touch-O-Matic Industrial Cutters.

▲ For more details circle **NED-406** on enclosed inquiry slip ▲

MOLTEN METAL PUMP
handles liquids up to 1000° F

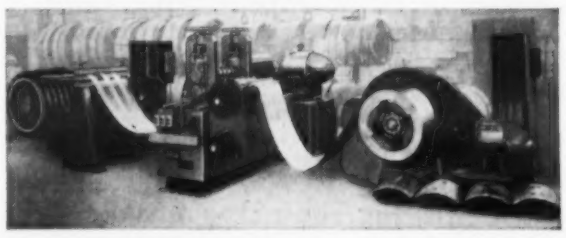
Built with no moving parts, this alternating current electromagnetic pump handles liquid metals and other low resistance conducting fluids with specific resistance equal to or less than stainless steel (about 90 microhm - centimeters) at temperatures up to 1000° F. Pump operates on the principle that a current - carrying conductor in a magnetic field is acted on by a force. With the fluid serving as the conductor, and with current and flux properly applied, pumping occurs. Amount of liquid metal that can be pumped depends upon the pressure; at 20 psi, pump moves about 28 gpm. Pump consists of three units, transformer, capacitator and cell, which operate on 230 v at 30 amp. Made by **General Electric Co.**, Schenectady 5, N. Y.



▲ For more details circle **NED-407** on enclosed inquiry slip ▲

STRIP STEEL SLITTER
handles material up to 0.125-in. thick and as thin as 0.001-in.

Main feature of this Precision Slitter designed for strip steel users, processors and manufacturers is use of removable gibs for easy removal of the chocks



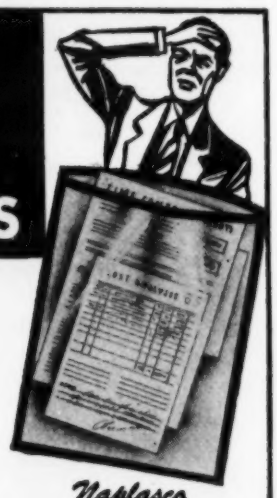
carrying the top arbor bearings. Up and down adjustment of chocks is easily made by handwheels, while dial indicates amount of adjustment. Machine handles material up to 0.125-in. thick, but can be adapted as a driven slitter for material as thin as 0.001-in.

Payoff reel has expanding overhung mandrel which fits into coil core and grips it when expanded to prevent wraps of coil from slipping over each other. For light gage material, reel is motor driven, and for low speeds, material is maintained in free loop in front of slitter to prevent sudden jerking on stock. Strip is prepared for slitting by breaker roll which removes scale and smooths strip for easy handling.

Auxiliary equipment includes wiper stand for thin materials which pulls strip through felt wipers and either a scrap winder or chopper disposal unit. Made **Herr Engineering Co.**, Warren, O.

▲ For more details circle **NED-408** on enclosed inquiry slip ▲

Save
TIME and HEADACHES



TRANSPARENT WORK RECORD HOLDERS

Because they keep work records clean and understandable, transparent work holders reduce costly mistakes in office and factory — and step up production. T.P.A. envelopes by NAPLASCO are the quality leaders, featuring crystal clear plastic, leatherette bindings and reinforced corners. They are needed wherever men work to eliminate confusion, "misunderstoods" and alibis . . . and are particularly desirable on defense contracts where clear records are a "must."

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***T. P. A. HOLDERS**
Come in sizes and styles to meet your special needs . . . for work records, job ticketing, material control and many other uses.

Write for low prices. FREE SAMPLE while supply lasts.

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MEASURE TENSION at a glance with Apco Mossberg Torque Tools

There's no need for guesswork in testing or adjusting final tension on precision assembly screws — not when you can do the job quickly and accurately with Apco Mossberg Torque Screw Drivers!

Now available in a full range of sizes — from 0-6 inch ounce models to 0-24 inch ounce models with large positive and positive-negative dials — Apco Torque Screw Drivers facilitate controlled screw tightening on all types of electrical equipment. Every model is easy to handle . . . simple to operate . . . completely dependable. Large, easy-to-read dials assure fast, accurate measurements. AND . . . Apco Torque Drivers feature standard Stanley Tool holders to accommodate interchangeable bits, make tightening and testing torque on *all* types of screws *easy* — even on light plastic screws where uniform tension is a requisite.

Contact your distributor or write direct now, for complete details on these and other Apco Mossberg "Torque Tools for Industry."

APCO MOSSBERG CO.
ATTLEBORO, MASS.

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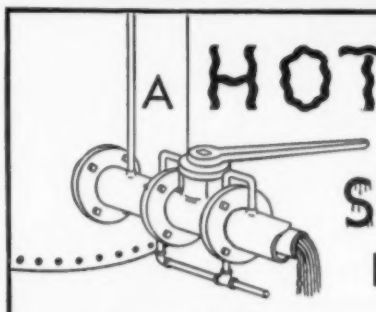
A HOT ANSWER TO A STICKY PROBLEM



The piping of heavy viscous materials from place to place poses a problem of no mean proportions to a process engineer.

A method whereby the product is completely surrounded by heat would be a logical answer. The heating medium, introduced into the jacket space of jacketed pipe and fittings made by Parks-Cramer Co. is the best way to get the heat into the product.

Every pipe section and every pipe fitting from cocks to elbows is fully jacketed. They are designed and engineered for the express purpose of heating viscous materials as quickly and efficiently as possible.

Why not turn your sticky problem over to us and let us make recommendations as to the design, layout and installations of jacketed pipe lines? Our know-how, gained from long years of experience and research, is ready to help you.

Send for Bulletin 152 for data, dimensions and specifications on our complete line of jacketed cocks and fittings.

Parks-Cramer Company
ENGINEERS and CONTRACTORS
Fitchburg, Massachusetts

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Specialists in All Fine-Pitch Applications, 12 to 200 D.P.

TACHOMETERS
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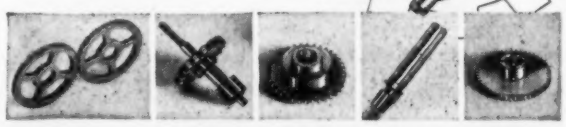

Send us specifications for your fine-pitch gear applications. Rynel Engineers will blueprint and set up production supply schedules to meet your most exacting requirements for accuracy and performance. It's production teamwork like this that has made Rynel the recognized source for precision fine-pitch gears. Send us prints, samples or specifications for quotation, or telephone one of our engineers to call at your plant.
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SEGMENT • SPROCKET • RATCHET • STRAIGHT BEVEL GEARS

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PORTELVATOR® "S"

for extra low pick-ups and extra high lifts...

Safety of Operation

is inherent in the mechanical lift principle of this brawny tool, which transmits power through worm, worm gear, and screw.

Eliminates "ganging-up" on heavy lifts. Reduces occurrence of industrial accidents. Saves valuable production time.

Get complete information now and be ready for the challenge ahead. Write for Bulletin P-506-S.

CAPACITY . . . . . 1000 POUNDS
MAXIMUM PLATFORM HEIGHT . . 58"
MINIMUM PLATFORM HEIGHT . . 6"

THE *Hamilton* TOOL COMPANY
901 HANOVER STREET • HAMILTON • OHIO • U • S • A

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standardize with standard

HALLOWELL® WORK BENCHES

OTHER **HALLOWELL** FEATURES

- Sturdy, rigid construction requires no bolting to the floor
- 4 lengths, 3 widths and 3 heights—all standard
- 3 top materials—steel, Presdwood on steel, and laminated wood
- Assemble them as single units or bolt them together to form a continuous bench of any length
- Functional design and neat appearance

Standardized work benches, with *standard* unit accessories, permit you to *custom build* your HALLOWELL Work Benches at a fraction of the cost of *building your own*. Write for descriptive literature. STANDARD PRESSED STEEL Co., Jenkintown 24, Pennsylvania.

HALLOWELL SHOP EQUIPMENT DIVISION
SPS
JENKINTOWN PENNSYLVANIA

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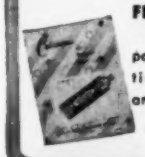
HOW TO SAVE 1/3 INSTALLATION SPACE
HOW TO GET MORE BORE POWER
HOW TO SAVE MONEY

Use Dependable, Powerful

O-M CYLINDERS

AIR—WATER—HYDRAULIC

In full range of sizes (1½" to 8" bores). All machined steel with bearing bronze throughout. Interchangeable parts and mounting brackets.



FREE CATALOG Brand new! 28 pages of specifications, diagrams, and parts listing.

FREE TEMPLATES Complete set. Shows all cylinders and mounting brackets, 1/2 or 1/4 scale.

Write today to

ORTMAN MILLER MACHINE CO.
1222 150th St., Hammond, Indiana

For more details circle NED-415 on enclosed inquiry slip

BENCH GRINDER

both sides of wheels are utilized to handle large oddly shaped parts

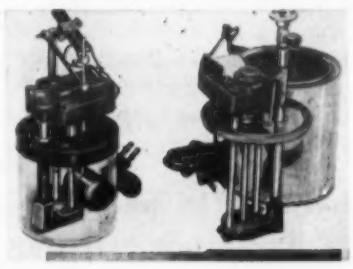
Flat housing surface of No. 246 bench grinder allows operator to maneuver large, oddly shaped castings or parts so that both sides of each grinding wheel can be used. Grinder is powered by ¼-hp full ball bearing constant speed induction motor and is equipped with adjustable tool rests and safety wheel guards which are wide enough to allow use of wire wheel brushes. Guards are drilled for mounting eyeshields. Toggle switch is enclosed in molded case on base of grinder.

Unit is furnished with three-wire rubber covered cord with ground connections; firm-gripping rubber feet; and one coarse and one fine 6 x ⅝-in. grinding wheel. Motor operates on 110-115-v, 125-v, 150-v and 220-230-v, 50-60-cycle single-phase ac at 2850 rpm full load and 3450 rpm no load. Made by **Stanley Works,** Stanley Electric Tools Div., 104 Elm St., New Britain, Conn.

For more details circle NED-416 on enclosed inquiry slip

MINIATURE LIQUID PUMPS

move 75 gph at zero lift or 10 gph at 3-feet lift



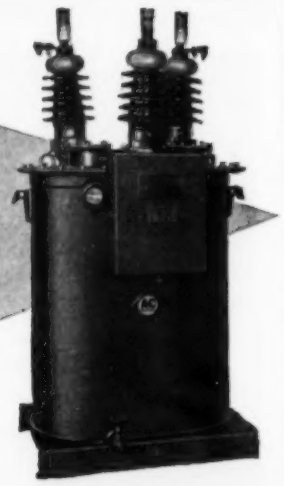
Shown at left in illustration is an automatic miniature condensate pump mounted in 1-pint glass jar with plastic cover. Outlet is ⅛ IPT and can be used with rubber tubing or standard water pipe. Unit is used to collect condensate in refrigeration system. As liquid drips or flows into jar it raises float, which at a predetermined level, actuates mercury pump switch. Pump operates and empties the jar, carrying liquid to a drain. Motor is two-pole fan cooled continuous duty 1/90-hp type and will move 75 gal of water per hour at zero lift and 10 gph at 3 ft lift.

Pump at right without automatic control is inexpensive unit which uses a plastic pump and 1-qt paint can as integral parts. Applications for both units include recirculating hot or cold water, evaporative coolers, humidifiers, air washers, agitating, laboratory use, transferring, emptying or filling. Made by **Samuel S. Gelber Co.,** Dept. ED, 162 N. Clinton St., Chicago 6, Ill.

For more details circle NED-417 on enclosed inquiry slip

A DESIGN FOR ACCURACY

ALLIS-CHALMERS METERING OUTFITS



THIS METERING OUTFIT combines the characteristics of both potential and current transformers at real installation economy. And you get traditional A-C instrument transformer accuracy that equals or exceeds ASA standards.

Important advantages: 1) savings in space with only one unit to mount; 2) transformers interconnected at the factory to simplify installation; 3) neat appearance.

High safety factor and sound electrical design proved in years of successful operation under unusual conditions. All metering outfits are furnished with double current ratings to provide for future load growth.

For Bulletin 61B7168 on instrument transformers or metering outfits, contact your nearby A-C sales office. Or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-3775

ALLIS-CHALMERS A-C

For more details circle NED-418 on enclosed inquiry slip

ARMSTRONG *Carbide* TOOL HOLDERS

FOR HIGHER SPEEDS, AND HEAVIER FEEDS

ARMSTRONG Carbide Tool Holders and ARMIDE (Carbide Tipped Cutters) come in cased sets for tool rooms and maintenance departments, and individually in all sizes for general machine shop and production turning. They permit not only the ready machining of sand-filled castings, the hardest and toughest steels as well as many heretofore "unmachinable" materials, but also make practical much heavier cuts and cutting speeds up to 600 f.p.m. on ordinary work. They also run from 10 to 100 times as long between regrindings.

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ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
5245 W. ARMSTRONG AVENUE, CHICAGO 30, U.S.A.
NEW YORK • SAN FRANCISCO

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WITH the amazing new compact OZAMATIC, you simply feed in your original copy of any letter, drawing, or report on ordinary translucent material. In a matter of seconds you have your first copy—*clean, dry* and *ready to use!* Letter-size copies at a rate up to 1,000 an hour . . . at a cost of less than 1½c each.

You'll find many uses for the Ozalid direct copying process entirely self-contained in the desk-top OZAMATIC machine. It makes copies up to 16 inches wide, at speeds up to 30 feet per minute. Larger Ozalid machines accept wider originals, and have even greater capacity. Any girl in your office can learn to operate any Ozalid machine in five minutes.

Write today for free, illustrated literature—or call the Ozalid distributor listed in the classified section of your local phone book.

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A Division of General Aniline & Film Corporation.
"From Research to Reality."
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air is expensive

IN THE WRONG PLACE

Air mixed with the steam in your heaters or coils is expensive because it retards heat transfer and lowers steam temperature. Remove air from steam heated machines with *Sarco thermostatic air vents.* Write for Bulletin 276 and the name of the Sarco man nearest you. He can help you select the best vent for your purpose and the right place to install it.

Represented in Principal Cities 502

sarco

SARCO COMPANY, INC.
Empire State Building, New York 1, N. Y.
Sarco Canada, Ltd., Toronto 5, Ontario

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PRODUCTIVITY UP ...COSTS-DOWN

With the NEW . . . Complete Line of

WESTINGHOUSE CUSHIONED PNEUMATIC CYLINDERS

8 STAR FEATURE

1. DIAMETERS: 1½" to 8" . . . required stroke
2. CUSHIONED ADJUSTABLE STROKE
3. FLANGE, FOOT, SWIVEL, OR TRUNNION MOUNTING
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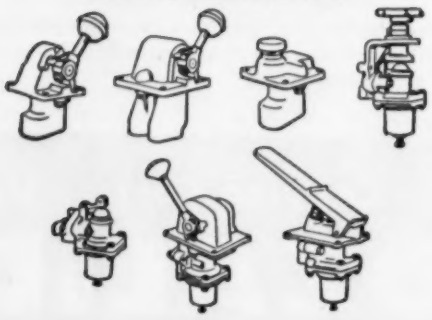
8. PACKING CUPS OF FAMOUS "WABCO" ® COMPOSITION

Combined with a complete range of modern pneumatic controls.



INDUSTRIAL PRODUCTS DIVISION WESTINGHOUSE AIR BRAKE COMPANY WILMERDING, PENNA.

Factory Branch: EMERYVILLE, CALIF. Distributors throughout the United States . . . Consult your Classified Directory. Distributed in Canada by: Canadian Westinghouse Co., Ltd., Hamilton, Ontario.

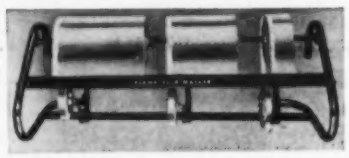
▲ For more details circle NED-422 on enclosed inquiry slip ▲

THREAD RING GAGES
with inserted carbide thread segments

Inserted carbide thread segments in line of thread ring gages enable them to deliver from 30 to 50 times more inspected parts than steel rings. They are designed for volume gaging of identically sized threads. Because of hardness and wear resistance of the segments, the rings maintain their initial accuracy over extended periods of time. Gages can be reserviced for wear and can be used as master or reference rings. Made by **Hanson-Whitney Co.**, 170 Bartholomew Ave., Hartford 2, Conn.

▲ For more details circle NED-423 on enclosed inquiry slip ▲

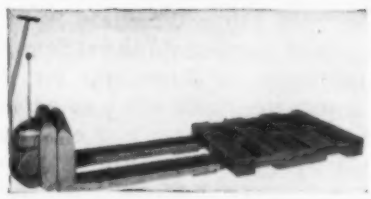
MASKING PAPER HOLDER
accommodates rolls up to 36 in. wide



An aid to spray painting operations, the Permacel No. 8 Universal Masker is fully adjustable and can accommodate up to 36-in. width masking paper in single roll, or several combinations in smaller widths. Made of steel tubing, device can be bolted to portable wheeled bench or stationary work table, or fastened permanently into wall in either vertical or horizontal position. Cutter bar can be positioned at any angle to suit operator. Addition of one or two 081 conversion kits adapts masker to handle any number of combinations of Permacel-750 paper up to 36 in. wide. Made by **Industrial Tape Corp.**, Dept. R, New Brunswick, N. J.

▲ For more details circle NED-424 on enclosed inquiry slip ▲

FLOOR TRUCKS
for handling double-faced pallets



Leverlift floor truck features a forked style platform with Toggle Boosters and helper rolls that enable it to slip into double-faced pallet without excessive maneuvering. Toggle Boosters on the ends of the platform tines engage the bottom face of the pallet first, lifting the platform slightly so that the rear wheels can roll smoothly into the pallet. Rear wheels are then projected through the bottom of the pallet. While the load is raised by hydraulic pump it is moved toward the operator. Truck capacity is 4000 lb and five standard fork lengths are available. Made by **Service Caster & Truck Corp.**, 578 N. Brownswood Ave., Albion, Mich.

▲ For more details circle NED-425 on enclosed inquiry slip ▲

"FULFLO" OIL BY-PASS RELIEF VALVES

NEED NO MAINTENANCE

For ram presses, machine tool hydraulic mechanisms, Diesel and oil-burning equipment.

NON-CHATTERING
no pounding noise.

BRASS OR CAST IRON

For pressures from 0 to 500 lbs. Sizes ¼" to 2". Standard or flange types.

TODAY. .write for your personal copy (on your letterhead, please) of FULFLO MECHANICAL DATA BOOK.

FULFLO THE FULFLO SPECIALTIES CO. Inc. BLANCHESTER, OHIO

▲ For more details circle NED-426 on enclosed inquiry slip ▲

WILLSON PRODUCTS, Inc., 219 Washington St., Reading, Pennsylvania

▲ For more details circle NED-427 on enclosed inquiry slip ▲

Let Farval do your lubricating and step up machine production

THROUGH efficient, dependable lubrication of machines and industrial equipment of all kinds, Farval saves 4 ways: It saves oiling labor, it saves lubricant, it reduces bearing expense, and most important of all, it eliminates down time, thereby increasing machine production.

The Farval System is a positive mechanical method of delivering oil or grease under pressure to a group of bearings from one central station, in exact quantities, as often as desired. It consists of a central pumping unit, automatic or manually operated, two main supply lines and a measuring valve for each bearing.

"Case Studies 1952" and Bulletin 25 give you the facts and figures. Write to The Farval Corporation, 3283 East 80th Street, Cleveland 4, Ohio.

Write for these FREE bulletins

FARVAL
CENTRALIZED SYSTEMS OF LUBRICATION

▲ For more details circle NED-428 on enclosed inquiry slip ▲

CUT SPRAYING COSTS with CO_2 POWERED GUN

NO HOSES • NO COMPRESSOR • NO ELECTRICAL OUTLETS • NOTHING EXTRA TO BUY!

BECKER
PRESSURE-TYPE
SPRAY GUN
USED EXTENSIVELY IN FACTORIES, HOMES, FARMS, INSTITUTIONS

For:
- Paints
- Oils
- Varnishes
- Enamels
- Fire-Proofing
- Decorating

ONLY $15.95 POSTPAID with 3 Cartridges

Handy for hundreds of industrial uses where expensive, heavy, cumbersome compressor type spraying is unnecessary. Becker Spray Gun is ruggedly built; heavy gauge (21 liquid oz.) steel container, cast aluminum head, brass and stainless inserts. Powerful CO_2 cartridges spray up to one container-full. See your Distributor or order direct, postpaid. Extra CO_2 cartridges at your dealer's or 10 for $1 postpaid.

SULLIVAN-BECKER CO., DEPT. 172-J, Kenosha, Wis.

▲ For more details circle NED-429 on enclosed inquiry slip ▲

. . . Increase Production . . . Lower Operating Costs!

with finger tip control

LOVEJOY

variable
SPEED PULLEYS

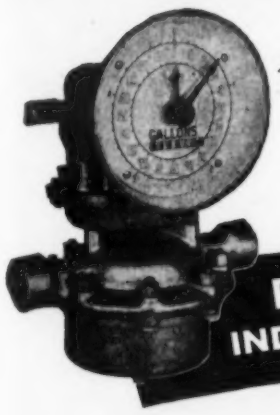
A mere turn of the hand is all that is required for instant speed correction on your machinery. Changes in production schedules, operator speed adjustment or specification variations are accomplished without loss of time or labor. Benefits of LOVEJOY finger-tip-control pulleys are reflected in an *improved* product—manufactured at a *lower* cost. Sizes from fractional to 8 hp. Ratios to 3 to 1.

Get full information on this complete line of economical variable-speed pulleys. Write today for fully illustrated catalog and engineering manual.

LOVEJOY FLEXIBLE COUPLING CO.
5003 W. Lake Street, Chicago 44, Ill.
Also Mfrs. Lovejoy Universal Joints and Lovejoy Flexible Couplings

▲ For more details circle NED-430 on enclosed inquiry slip ▲

THERE'S *Safety* IN THESE NUMBERS



Stop Losses
Control Costs
Guard Formulas

ROCKWELL INDUSTRIAL METERS

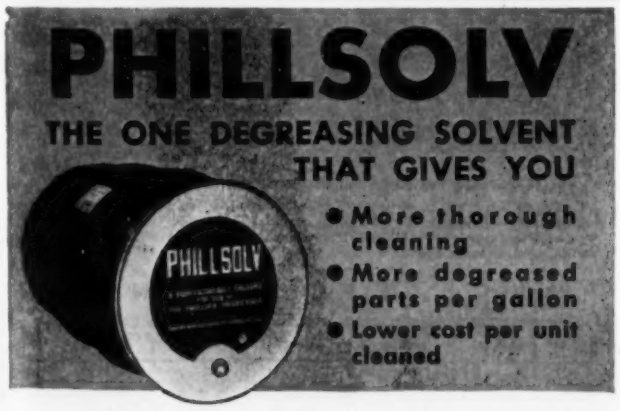
Let Rockwell industrial meters "police" for your accountants and production supervisors every liquid movement within your plant. You can install these lastingly accurate guardians with profit when batch mixing formulas, for inventory records, for cost identification. A size and type meter for every need. Measure practically every liquid. Write for bulletin.

ROCKWELL MANUFACTURING COMPANY
Dept. C5, 400 N. Lexington Ave., Pittsburgh 8, Pa.

▲ For more details circle NED-431 on enclosed inquiry slip ▲

PHILLSOLV

THE ONE DEGREASING SOLVENT THAT GIVES YOU



- More thorough cleaning
- More degreased parts per gallon
- Lower cost per unit cleaned

PHILLSOLV puts real efficiency into your degreasing. Phillsolv's heavier vapors, greater solvency and higher vapor temperatures clean better, work faster, go farther than other solvents. More solvent condenses on each part for more thorough degreasing. Phillsolv's higher temperatures dispel moisture preventing rust and pitting. These factors add up to higher production, lower cost to you.

Use Phillsolv for the most efficient vapor degreasing available.

Write for Your Copies of these interesting bulletins.

PHILLSOLV BULLETIN giving complete details on physical and chemical properties of Phillsolv.

COMPLETE INFORMATION on the Phillips line of electric vapor degreasers.

DEGREASING HANDBOOK gives questions and answers on degreasing processes and problems.

ENGINEERED SERVICE

Phillips 3461 Touhy Avenue Chicago 45, Illinois
MANUFACTURING COMPANY
ENGINEERED METAL CLEANING EQUIPMENT

▲ For more details circle NED-432 on enclosed inquiry slip ▲

PHOTO COPY MACHINE
produces dry two-sided copies

Any typed, written, printed or drawn items can be duplicated by the Copi-Stat photo copy machine without complex procedure. No darkroom is required. To operate, a sheet of sensitized paper is exposed with the original, then the exposed sheet is combined with a second sheet of 'Copi-Stat paper' and inserted in the machine. Knobs are turned for 10 seconds until the sheets come out. In 15 seconds the process is complete. Two-sided copies are produced by the machine, made in three portable sizes: 8½, 11 and 17 in. All can be motor-equipped. Made by **General Photo Products Co.,** Dept. NED, General Photo Bldg., Chatham, N. J.

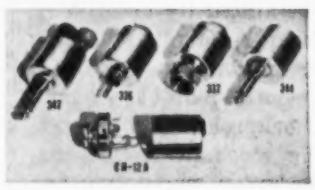
▲ For more details circle NED-433 on enclosed inquiry slip ▲

VISIBLE CARD FILE
fanning of cards is automatic

Instant and automatic magnetic fanning of cards when index divider card is moved is a feature of Magne-Dex visible card file which eliminates slow fingering and searching for cards. As only the card desired is handled, cards last longer. File is available for card sizes from 6 x 4 in. up to 10 x 10 in. in 500 to 10,000-card units of tub desk, record desk or tray styles. Unit is permanently magnetized. Made by **Business Efficiency Aids,** 7918 N. Lincoln Ave., Skokie, Ill.

▲ For more details circle NED-434 on enclosed inquiry slip ▲

SHIELDED JACK & ADAPTERS
for radio and electronic equipment



Universal interchange of equipment is possible with this line of adapters and shielded Jax. Five adapters are available: with dual-purpose binding post banana jack input and standard phone plug output; to accommodate standard pin plugs to conventional phone plug; standard phone jack input with female microphone connector output; phone jack input and phono connector plug output; and plug adapter to connect phono connector plug into conventional phone jack. CN-12 Shielded Jax is especially usable in a high impedance circuit where effective shielding is essential. Made by **Switchcraft, Inc.,** 1330 N. Halsted St., Chicago 22, Ill.

▲ For more details circle NED-435 on enclosed inquiry slip ▲

ONE..*Good Way*
TO SAVE PRODUCTION TIME

KESTER SOLDERFORMS

For Soldering with flame, carbon-resistance, oven, induction and conventional iron

DIMENSIONAL STABILITY Every single Kester Solderform is made exactly to specification. What's more . . . they are delivered that way to you, in perfect condition, because of Kester's scientific packaging.

Write for sample assortment or test samples for your specific job.

KESTER SOLDER COMPANY
4249 Wrightwood Ave., Chicago 39
Newark 5, New Jersey • Brantford, Canada

KESTER SOLDER

▲ For more details circle NED-436 on enclosed inquiry slip ▲

HYSTER® *Turret Trucks*
handle materials faster . . . cheaper

Fast horizontal transporters... for loads up to 4000 pounds. Hyster Turret Trucks go anywhere man-pulled or power-driven "walker-controlled" trucks can go. They operate an average 8-hour shift on a gallon of gasoline.

Anyone can operate — great maneuverability. Fully automatic clutch and transmission. No gear shifting. No levers. Tight quarters, narrow aisles and ramps are no problem. 360° steering is done through drive wheel. Truck "inches" along or goes 8 MPH fully loaded; 10-12 MPH emtpy.

Low purchase cost. One of the lowest priced, self-propelled materials handling trucks—in line with most "walker-controlled" units.

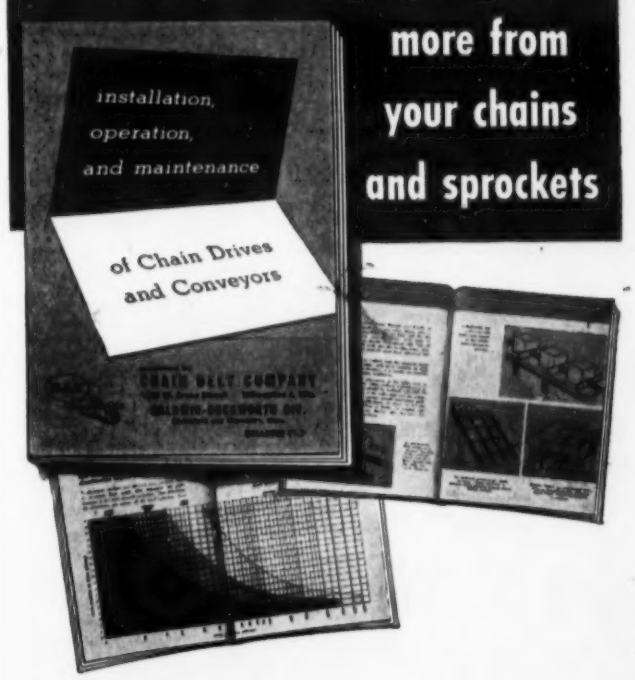
See your Hyster dealer, or write for literature. 4 models — PALLET . . . PLATFORM, CARGO and TUG.

HYSTER COMPANY
THREE FACTORIES
2906 N. E. Clackamas, Portland 8, Ore.
1806 North Adams St., Peoria 1, Illinois
1010-06 Myers Street, Danville, Illinois

▲ For more details circle NED-437 on enclosed inquiry slip ▲

MAINTENANCE MEN!

this book helps you get more from your chains and sprockets



Here's just what you're looking for to help you get longer life from your chain drives and conveyors. This new pocket-size handbook is packed with useful tips that are of real value.

There are chapters devoted to installation, lubrication, operation, repair and storage as well as a number of helpful sketches, charts and graphs. One novel feature is a detailed check chart on "Cures for Sick Chains." It's a book you'll want and keep, and it's yours for the asking. Send for your copy today.

REX *Just use the coupon*
BALDWIN-REX®

Chain Belt COMPANY
OF MILWAUKEE

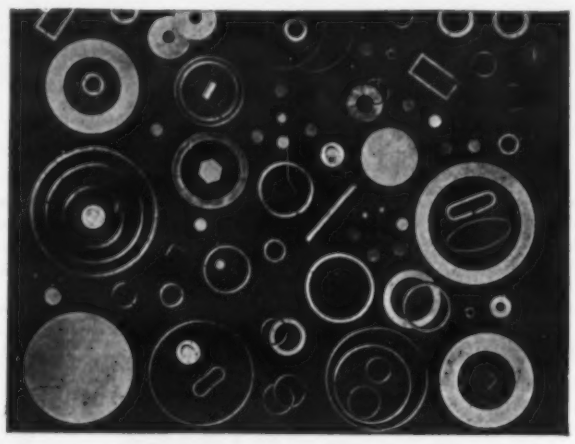
Chain Belt Company 52-407A
4686 W. Greenfield Ave., Milwaukee 1, Wis.
Gentlemen: Please send me ( ) copies of your Bulletin 51-7.

Name.....
Company..... Dept.....
Address.....
City..... State.....

▲ For more details circle NED-438 on enclosed inquiry slip ▲

KRE-CO PREPLACED BRAZING ALLOYS LOWER JOINING COSTS

For speedier production and leak-tight joints stronger than the parent metal. Made from Easy-Flo, Sil Fos, Copper, Phos Copper, Bronze, Soft Solder and Aluminum in rings, disks, flat washers, stampings, and special shapes and sizes to meet all requirements. Speedy deliveries in any quantity. Interesting quotations. Tell us to present facts and figures to lower your brazing costs.



CHARLES W. KRIEG COMPANY
48-60 Dickerson St. - HUmboldt 5-2000 - Newark 4, New Jersey

▲ For more details circle NED-439 on enclosed inquiry slip ▲

IT PAYS TO INVEST IN PROTECTION

Send for Descriptive Literature

HANNIFIN "Air Warden"

Hannifin "Air Warden" safeguards against loss of production time—protects your valuable air-operated equipment three ways.

1. AIR FILTER—removes grit, dirt, scale, moisture, emulsified oil.
2. PRESSURE REGULATOR—keeps pressure where you want it. No danger of pressure build-up with "Air Warden."
3. LUBRICATOR—atomizing type lubricator, can be filled without shutting off air pressure.

Sold separately or in combination (as shown).

HANNIFIN

HANNIFIN CORPORATION, 1127 S. Kilbourn Ave., Chicago 24, Illinois

▲ For more details circle NED-440 on enclosed inquiry slip ▲

TEFLON IMPREGNATED ASBESTOS PACKING

The Advantages of Teflon
PLUS
Greater Resiliency
Moderate Cost

Chemically inert, heat-resistant, anti-hesive Teflon has solved many packing problems. But under certain conditions, Teflon's cold-flow characteristic causes trouble. The solution to cold-flow is Flexrock #401 braided white asbestos packing impregnated *throughout* with Teflon.

#401 offers solid Teflon's advantages *plus* superior resiliency, permitting a tight, lasting seal at low gland pressure, against *acids, alkalis and solvents.* #401 is versatile, eliminates the need for costly, machined Teflon rings. Stock it for applications demanding absolute *non-corrosion, non-contamination.* Won't "seize" a shaft or spindle; serviceable from −100°F. to 500°F. In continuous lengths, square section, from ⅛" to 1" by 1/16" increments.

We furnish a complete line of *Teflon Packing:* solid or impregnated in endless ring or continuous braided construction; *Teflon Gaskets:* solid or jacketed; *Teflon Stock:* sheets, tape, cylinders, rods, tubing, bars. *Also, special shapes.*

Mechanical Packing Division
FLEXROCK COMPANY
PHILADELPHIA 4, PA.

Mechanical Packing Division
FLEXROCK COMPANY
3603 Filbert Street, Phila. 4, Pa.

☐ Send more information on #401 Packing
☐ Send information on these other Teflon products _____

Name _____ Title _____
Company _____
Address _____
City _____ Zone ____ State _____

Please clip coupon to Company letterhead

▲ For more details circle NED-441 on enclosed inquiry slip ▲

WATERPROOF DOORS for transformer vaults, other uses made in standard and special sizes

Watertight and weathertight, this line of Fiberglas-insulated flush door assemblies consists of door and formed steel frame for use on transformer vaults, test rooms, weatherproof rooms, marine bulkheads and other uses. Articulated hinges permit complete dogging of the doors on the hinge side. Hinges have stainless steel pins and bronze bushings for wear and weather resistance. Doors have a mechanically fastened, replaceable and adjustable Neoprene gasket with foam rubber core that distributes pressure.

Door assemblies are offered in five standard clear opening sizes: 26 x 60, 26 x 66, 26 x 72, 30 x 66, and 36 x 66 in., with round or square corners. Other sizes can be supplied. Bronze-framed fixed light is optional. Number and location of dogs are determined by user. Doors can have ¼-in. formed steel plate frame or large frame which serves as complete wall unit. They can be made of galvanized steel, aluminum, stainless steel or other noncorrosive material. Made by **Overbeke-Kain Co.,** 20979 Aurora Rd., Bedford, O.

▲ For more details circle NED-442 on enclosed inquiry slip ▲

REVERSING DRUM SWITCH indexing is smooth and shockproof

Manual reversing of small motors on machine tools, woodworking tools, hoists, conveyors and processing equipment is facilitated by class 2601, type A small reversing drum switch. Indexing is smooth, positive and shockproof, and operating mechanism will convert for maintained or spring return action. Two ½-in. conduit openings in bottom of enclosure, plus adequate space inside, allow easy wiring. Cover removes easily for access to three sides of mechanism. Nameplate indicates handle position and gives rating information, while instruction sheet on inside cover tells how connections are made for single phase, polyphase and direct current motors. Made by **Square D Co.,** 4045 N. Richards St., Milwaukee 12, Wis.

▲ For more details circle NED-443 on enclosed inquiry slip ▲

Saves on power costs under load — also in idle and no-load periods!

Cuts maintenance costs and downtime delays — no moving parts to wear out!

Protects the primary input line against unbalanced conditions!

New P&H DC Rectifier Welder — with Dial-lectric Control

Gives you economy, quiet operation, balanced-line loading, and instantaneous remote control.

You get low-cost DC welding current without a generator, from this new P&H DC Rectifier Welder — industrial twin to the famous P&H AC Dial-lectric Welder. Two sizes: 200 and 300 Amps at 40V.

No troublesome mechanical devices to control amperage—simply turn a single radio-type knob. This and other P&H extra-value features help you realize savings on power consumption and maintenance.

Ask your P&H representative or distributor for further information. Or write direct.

P&H WELDING DIVISION
HARNISCHFEGER CORPORATION
4537 WEST NATIONAL AVENUE
MILWAUKEE 46, WISCONSIN

Power Shovels • Crawler and Truck Cranes • Overhead Cranes • Hoists • Arc Welders and Electrodes • Soil Stabilizers • Diesel Engines • Pre-Fabricated Homes

24928

▲ For more details circle NED-444 on enclosed inquiry slip ▲

DEPENDABLE ACCURATE CONTROL OF PROCESS EQUIPMENT WITH THE NEW... Bell Switch CONTROL

HERE is help for liquid level control problems. The new Bell Switch Control incorporates a snap-action magnetic proximity switch which is actuated by a float operated magnetic armature. Gives you accurate control and automatic cutoff of such equipment as limit controls, scrubbers, separators and also can furnish high and low stage alarms. Especially suitable for use with highly corrosive fluids. There is virtually no liquid level control problem that can't be solved with this dependable, low maintenance Bell Switch Control. A number of standard and special mounting styles available to meet particular requirements.

- ✓ No Packing Boxes, Bellows or Diaphragms to worry over and replace
- ✓ Rugged Spun Steel Body
- ✓ Eliminates False Action due to Turbulence
- ✓ Standard or Explosion Proof Cover Available
- ✓ Mechanism Completely Isolated from Corrosive Fluids
- ✓ Switch Rating: 10 amps. at 110 volts; 5 amps. at 220 volts, A. C. Direct loads to ¼ h.p. A.C. ratings

WRITE TODAY FOR COMPLETE DESCRIPTIVE LITERATURE

JO-BELL PRODUCTS, INCORPORATED
4840 So. St. Louis Ave. • Chicago 32, Illinois
Liquid Level Controls • Carbonators • Magnetic Switches • Special Controls

▲ For more details circle NED-445 on enclosed inquiry slip ▲

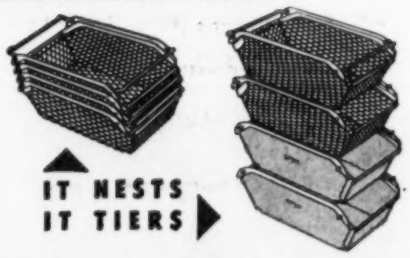
NOW- *an expanded metal* NESTIER

for all DIPPING, DEGREASING, CLEANING, AND PLATING OPERATIONS

The demand for a Nestier to fulfill the requirements of all dipping operations has led to the design of this new expanded metal basket.

Expanded metal sheet is actually more rigid than an equal weight of solid steel plate or wire mesh. Formed to the distinctive Nestier shape and equipped with Nestier bails and runners, you have a unit which retains not only its original strength but all of the features which have made the Nestier outstanding.

This new Nestier, available in the two standard Nestier sizes, is made of flattened expanded steel mesh, electro-zinc plated and is interchangeable with the standard Nestier.



IT NESTS
IT TIERS

— performing the same functions as the standard Nestier

Nestiers nest to save space. Bails prevent complete telescoping, eliminate jamming or sticking. Tiered, bails lock units to form rigid stack. Parts in all units are visible and accessible from either end.

SPECIFICATIONS

NesTier	Gauge	Mesh	Length	Width	Weight
No. 220	13-15	5/16" x 1"	22⅝"	12½"	6 lb. 14 oz.
No. 175	16-18	5/16" x 1"	18⅛"	9⅛"	4 lbs.

No. 220—Cubic content—880.3 cu. in. Capacity—200 lbs. each.
⅛" bails will support maximum load of 600 lbs. or 3 tiers of loaded units.

No. 175—Cubic content—395.6 cu. in. Capacity—100 lbs. each.
¼" bails will support maximum load of 400 lbs. or 4 tiers of loaded units.

EVERY MATERIALS HANDLING ENGINEER WILL WANT THIS BULLETIN!

Write for this bulletin describing the NesTier System, including complete specifications, racks, trucks, conveyor hangers, inserts. Our service includes complete engineering advice to systematize small parts handling in your plant.

NESTIER — IT NESTS - IT TIERS

THE CHAS. WM. DOEPKE MFG. CO., Inc. • Rossmoyne, Ohio • *Metal Specialties Division*

▲ For more details circle NED-446 on enclosed inquiry slip ▲

"Custom" Features IN ECONOMICAL STANDARD STEEL LOCKERS

penco

Penco gives you a choice of 337 combinations of *standard* locker types, sizes and design variations—permitting maximum flexibility in locker room planning! Have your own "custom-type" installation at *standard* cost! Locker catalog No. L-100 shows how. Send for it *now!*

Penco Single Tier Lockers with slope tops and closed bases—boost employee morale, promote locker room cleanliness!

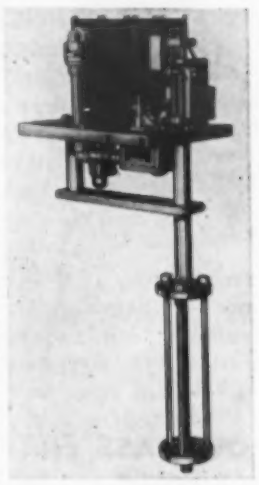
Founded 1869 by I. Lewis Sagendorph

PENN METAL Corporation of Penna.

82 OREGON AVENUE, PHILADELPHIA 48, PA.

For more details circle NED-447 on enclosed inquiry slip

VISCOMETER design is nonclogging



Viscometer measuring element for solutions that build up a coating that interferes with accurate measuring makes use of an open construction that facilitates removal. This element is mounted vertically with the liquid level passing through the rod structure. Basic principle of operation is the same as company's standard line of instruments. This model can be made of materials, and to dimensions suitable for the actual application. It functions with existing recording or recording-controlling units. Made by **Norcross Corp.**, Dept. N29, 247-B Newtonville Ave., Newton 58, Mass.

For more details circle NED-450 on enclosed inquiry slip

GET BOTH-

top performance . . . economy with "RC" Flexible Couplings

"RC" Coupling—in 30 sizes, 3/8 to 12 in. bore.

Only the Link-Belt "RC" Flexible Coupling gives you single chain simplicity plus divided rollers. Divided rollers equalize the load . . . maintain proper balance at high speeds . . . adjust to reasonable misalignment and end float. There's a Link-Belt Roller Chain Coupling for ratings from fractional to 1000 hp. For complete information, write for "RC" Coupling Folder 2363.

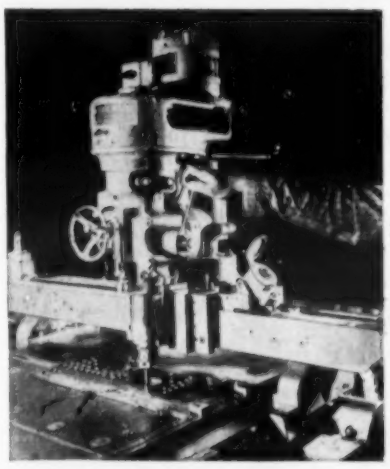
LINK-BELT

"RC" FLEXIBLE COUPLINGS
LINK-BELT COMPANY
Dept. 22, 307 N. Michigan Ave.
Chicago 1, Ill.

12,797

For more details circle NED-453 on enclosed inquiry slip

LAYOUT-DRILLING MACHINE is heavy duty unit that will drill, ream or bore up to 5-in. holes



Material of practically any length and up to 36-in. wide can be handled on this Wales DeLuxe model drilling machine. It is designed for boring up to 5-in. diameter holes and also performs precision layout, drilling and reaming operations. Easy movement of work over full size table is assured by anti-friction ball inserts throughout entire area of table. Work is clamped to long slide rail which moves in hand scraped ways to position it under boring head.

Adjustable guide support for boring head can be moved close to work surface for rigidity and accuracy of bore. Two-speed gearing, controlled by handwheels, provides rapid traverse for rough positioning, and two built-in Scan-A-Scales 'zero in' the work to tolerances as close as 0.0001-in. Air clamps rigidly lock both boring head and side rail in exact position.

Two sets of handy steel drawers are located conveniently in base for holding boring tools, drills, reamers and other accessories. Four leveling screws on welded base compensate for uneven floors. Made by **Wales-Strippit Corp.**, 363 Payne Ave., North Tonawanda, N. Y.

For more details circle NED-451 on enclosed inquiry slip

Thor ANNOUNCES A NEW AIR IMPACT WRENCH

With Exclusive Rolling Ball Type Cam!

3/8" Bolt Size Capacity. "No. 24"

New cam design permits drawing threaded fasteners down faster and tighter BEFORE IMPACTING—the operation is speeded and fewer impact blows are required for final tightening.

Coupled with a large overload capacity, the new type wrenches are only moderately stressed in performing work within their rated capacity, resulting in greatly increased normal working life.

INDEPENDENT PNEUMATIC TOOL COMPANY
AURORA, ILLINOIS

Thor PORTABLE POWER TOOLS
ELECTRIC • PNEUMATIC

For more details circle NED-448 on enclosed inquiry slip

BEVERLY THROATLESS SHEARS

MAKE CUTS LIKE THESE

QUICKLY... EASILY... ACCURATELY

18 ga. metal cut with Model B-1 Shear.

Save time, labor and material—use a Beverly to make any cut . . . straight, curved or irregular in any metal. Exclusive design allows work to be turned at any angle while cutting. Standard in the industry for years. 4 models—capacities to 3/16" mild.

See your Beverly Distributor for a demonstration. Write for FREE illustrated circular on Beverly metal cutting Shears.

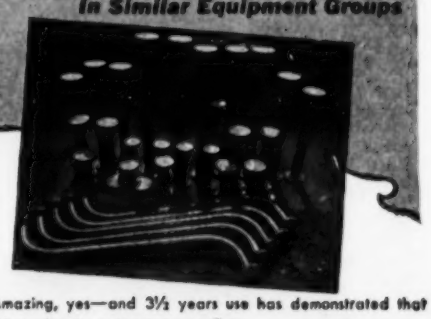
MODEL B-3 with ball bearing hold down. Cap. 3/4" mild; 10 gauge stainless.

Beverly SHEAR MFG. CO.
3016 W. 111th STREET • CHICAGO 42, ILLINOIS

For more details circle NED-449 on enclosed inquiry slip

Pipe Cost — $1,360 Plus Installation

Savings—Every Year—$8,000 In Similar Equipment Groups



Send for This Report

Details a case history on rubber lined pipe that applies to corrosion protection in any field. You will find it a thought-provoking text that may reveal ways you can use the services of our RUBBER ENGINEERS.

Amazing, yes—and 3½ years use has demonstrated that this saving is no temporary affair.

Many case histories have proven the merit of the La Favorite method of lining and/or covering pipe, valves, tanks and special equipment with exclusive La Favorite rubber compounds.

They have confirmed the value of this method of protection against corrosion and other destructive forces.

They show that it has SAVED countless thousands of dollars for users—and that is what counts!!!

Some of the Ways we are helping others

Made furnisher rolls for printing textiles, developed non-toxic white rubber linings for food processing equipment, constructed special rolls for the new non-contact printing process, devised static absorbing rolls, and provided many other specials for troubled production executives.

LA FAVORITE RUBBER MFG. CO.
273 Wagaraw Road Paterson, N. J.
RUBBER LININGS • RUBBER COVERING • RUBBER ENGINEERING

For more details circle NED-452 on enclosed inquiry slip

"If the Control of Air Flow Is Your Problem, Too"...

SEE HONEYWELL FOR DAMPERS

HONEYWELL DAMPERS are custom-built to job specifications . . . in any size, shape or blade arrangement . . . with Honeywell electric or pneumatic positioners, or for manual operation.

Ideal for the control of air flow or to mix air of different temperatures, they are being used throughout industry . . . on cooling towers, engine test cells, recirculating ovens, foundry and paint room exhausts, drying kilns, and countless other places.

Call in our local engineering representative for a discussion of your requirements . . . he is as near as your phone. MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, 4529 Wayne Ave., Philadelphia 44, Pa.

MINNEAPOLIS Honeywell
First in Controls

• *Important Reference Data*
Write today for a copy of new Bulletin 8502.

For more details circle NED-454 on enclosed inquiry slip

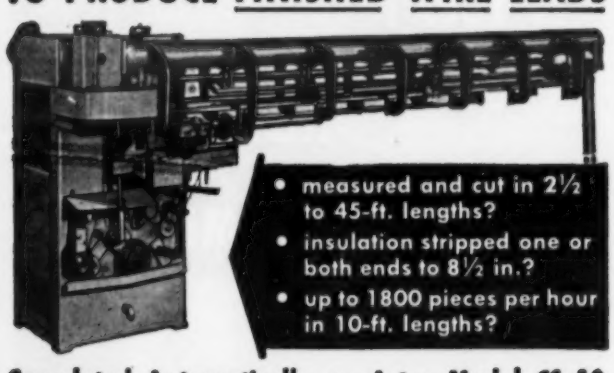
Quality Wire INSURES QUALITY SPRINGS

Whatever your spring wire requirements—consult with Seneca! Our production *geared to precision* in manufacturing oil tempered and hard drawn wire—round and flat—for all types of high grade mechanical springs. Seneca uniformity and dependability help the spring manufacturer produce high quality springs at low cost. Write . . . Seneca Wire & Mfg. Company, Fostoria, Ohio. Representatives in principal cities.

SENECA ROUND AND FLAT SPRING WIRE
WIRE & MFG. COMPANY · FOSTORIA, OHIO

▲ For more details circle NED-455 on enclosed inquiry slip ▲

Do you need this CAPACITY TO PRODUCE FINISHED WIRE LEADS



- measured and cut in 2½ to 45-ft. lengths?
- insulation stripped one or both ends to 8½ in.?
- up to 1800 pieces per hour in 10-ft. lengths?

Completed Automatically on Artos Model CS-10

Now you can get high production of insulated wire leads . . . accurately measured, cut in lengths up to 45 ft., and stripped at one or both ends. Leads are finished complete and collected in one fast, automatic cycle.

This Artos machine will handle wire, cord and cable up to No. 10 stranded or No. 12 solid. Consistently uniform results are obtained without cutting strands or nicking solid wire. Insulation may be stripped from 2 in. up to 8½ in. at one end and 6½ in. at the other. You can also slit parallel cord or remove the outer jacket on SJ appliance cords.

Inexperienced help can handle an Artos without trouble. Set-ups are quickly changed for different cut lengths and stripped lengths.

Write for this Free Bulletin
Get the complete story—write now for Bulletin 40 on the Artos Model CS-10.

ARTOS ENGINEERING CO. Automatic Wire Cutting and Stripping
2751 S. 28th St. • Milwaukee 46, Wis.

▲ For more details circle NED-456 on enclosed inquiry slip ▲

Now Spray On design layout ink

"JUST PRESS THE BUTTON ON THE CAN"

Faster! Easier!

No brush, no waste, no mess! Self-pressurized can sprays on CROWN Design Layout Ink in fine mist that dries to hard surface in a minute. Dark blue is standard—other colors on volume purchases.

ORDER TODAY!
$1.59 PER 12-OZ. CAN
15% discount on cases of 12
Additional discount for larger quantities
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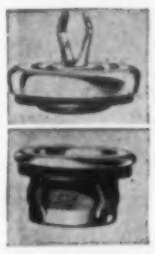
CROWN INDUSTRIAL PRODUCTS CO.
400 Borden Ave., Sycamore, Illinois
Please ship at once
_____(how many?) cans
_____(how many?) cases
CROWN Design Layout Ink
Name_____
Company_____
Our Purchase Order No._____
Address_____
City_____ Zone____ State_____

▲ For more details circle NED-457 on enclosed inquiry slip ▲

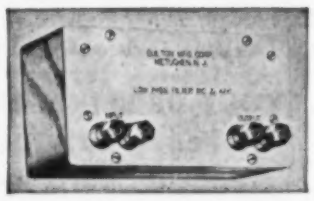
FAUCET WASHERS & SEATS
snap-in units renew faucets



Swivel action, ease of installation, Neoprene disk and corrosion resistant construction are features of Snap-In faucet washers and seats. Four sizes of seats and washers facilitate repair of all standard faucets. Leaks resulting from worn or damaged seats can be eliminated with Neoprene-gasketed seat which drives into hole and has compressible lugs to hold it in place. Kits of 25, 50 and 100 assorted sizes of seats and washers are available. Made by **Snap Products Corp., E. Brighton & Glen Ave., Syracuse 5, N. Y.**

▲ For more details circle NED-458 on enclosed inquiry slip ▲

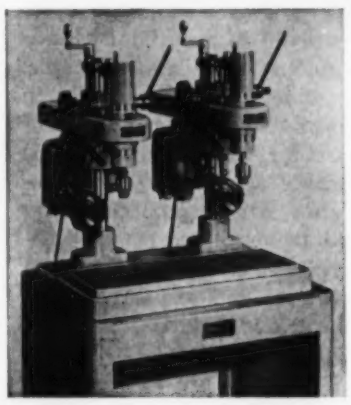
LOW PASS FILTERS
rated up to 47,000 ohms resistance



Series F-10 filters which feature low attenuation in pass band, high attenuation in rejection band, linear phase transfer and high characteristic impedance are designed for use with Glennite accelerometers and cathode followers for shock and vibration measurements, as well as for general laboratory use. Attenuation exceeds 55 decibels in rejection band. Filters also feature linear phase transfer characteristics that provide undistorted signal outputs in the pass band. Three models have 1, 2 and 5 kc frequencies; resistances of 47,000, 31,400 and 19,600 ohms; and direct current ratings of 8, 13 and 26 ma. Made by **Gulton Mfg. Corp., 210 Durham Ave., Metuchen, N. J.**

▲ For more details circle NED-459 on enclosed inquiry slip ▲

DRILLING MACHINE
for small, precision holes

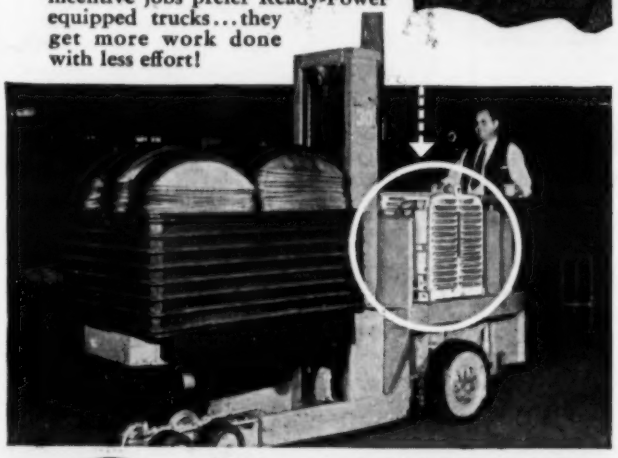


Designed for precision small hole drilling, line of drilling machines has capacities of 0.004 to 5/16-in. diameter, clearances up to 8 in. from center of chuck to column and up to 14 in. from base to chuck. Adjustable stops on all machines control hole depth. One model has a graduated hand wheel dial for speed control between 840 and 9300 rpm. Machines are offered in single base, multiple spindle design. Made by **Hamilton Tool Co., 901 Hanover, Hamilton, O.**

▲ For more details circle NED-460 on enclosed inquiry slip ▲

"My Choice? READY-POWER DRIVE ...Every Time!"

Ready-Power Drive is full electric drive featuring simple handling and full control, but with no limit to the hours of operation at peak efficiency. No wonder operators on incentive jobs prefer Ready-Power equipped trucks . . . they get more work done with less effort!

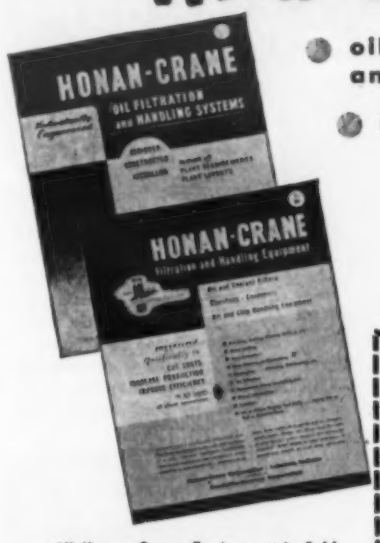


Remember . . . Your Truck Is No Better Than Its Power!

CONTINUOUS-DUTY POWER UNITS
The READY-POWER Co.
5832 Grand River Ave., Detroit 8, Michigan
Manufacturers of Gas and Diesel Engine-Driven Generators and Air Conditioning Units; Gas and Diesel-Electric Power Units for Industrial Trucks

▲ For more details circle NED-461 on enclosed inquiry slip ▲

What's Your Pro



- oil or coolant filtratio and handling?
- raw materials handling?

Honan-Crane has the Right Solution

All Honan-Crane Equipment is Sold on a Performance-Guaranteed Basis

WORLD'S LEADING OIL FILTER MANUFACTURER

Mail this Co
PLEASE SEND ME FREE
Name.....
Company.....
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Honan-Cran
A Subsidiary of Houdaill

▲ For more details circle NED-4 on en

MATHEWS CONVEYERS
A TYPE FOR EVERY PACKAGE HANDLING JOB

- WHEEL
- LIVE ROLLER
- SPECIAL CONVEYING MACHINERY
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PACIFIC COAS
MATHEWS CONVEYER COMPANY WEST CO
CANADIAN
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Engineering Offices or Sales Agencies in Princip

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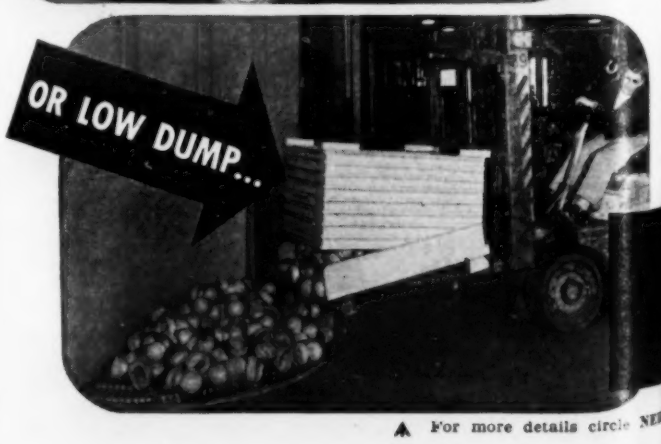

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Problem?

- filtering systems for jet or piston-engine test cells?
- chip, abrasive or other waste removal?

These two folders tell how Honan-Crane equipment solves your filtration and handling problems and pays for itself out of savings; they give full information about Honan-Crane Engineering Service and production facilities for special installations.

Mail this Coupon for Your FREE Folders

ME FREE FOLDERS DESCRIBED ABOVE.

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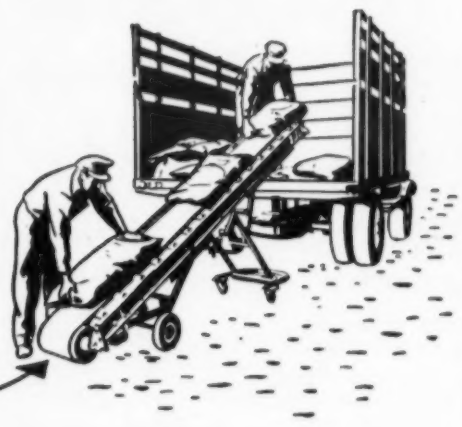
.....State.....

n-Crane Corp., 405 Wabash Avenue, Lebanon, Indiana
oudaille-Hershey Corporation

on enclosed inquiry slip



Write today for complete information

WS CONVEYERS
GENERAL OFFICES
PANY . . . ELLWOOD CITY, PENNSYLVANIA
PACIFIC COAST DIVISION
PANY WEST COAST . . SAN CARLOS, CALIFORNIA
CANADIAN DIVISION
PANY, LTD. . . . . PORT HOPE, ONTARIO
ies in Principal American and Canadian Cities

on enclosed inquiry slip

Work-O-Matic* Boxes do the job FASTER!

TALK *about versatility in materials handling* . . . the Work-O-Matic is one of the most efficient and versatile aids you've seen for cutting time and costs!

Used with a hydraulic fork lift truck, a Work-O-Matic box allows automatic, mechanical removal or deposit of parts at any height—*high* or *low!* And the discharge point remains constant at the selected fork lift height.

You'll also be interested in how these multi-duty boxes, with Union Metal positioning stands, are boosting production up to 50% per man per machine by speeding the flow of material in process at *proper work level!* For *all* the facts, write to The Union Metal Manufacturing Co., Canton 5, Ohio.

*Patent No. 2,445,038. Other patents pending.

UNION METAL
Materials Handling Equipment

on enclosed inquiry slip

HIGH-BAY REFLECTOR LAMP in 500 or 750-w ratings

This R-52 high-bay incandescent reflector lamp for industrial use has rated average life of 2000 hours and is available in ratings of 500 or 750 w. Designed for base-up burning positions, or within 25 degrees of vertical, lamps have maximum length of 11¾ in. They operate at 115, 120 and 125 v. No fixtures are required except where protection from spattering liquids is required. Reflecting surface is protected from dust and oily deposits. Made by **Sylvania Electric Products, Inc.,** Dept. 2-NED, 60 Boston St., Salem, Mass.

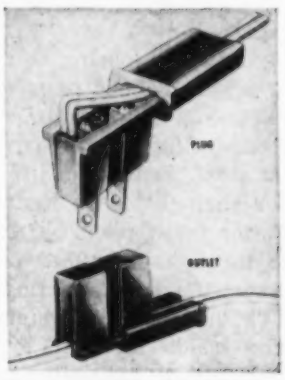
For more details circle **NED-465** on enclosed inquiry slip

PLUMBER'S FURNACE for all types of melting operations

Adjustable from low warming heat to over 65,000 Btu per hour, this plumber's furnace is adaptable for rapid melting of lead, babbitt, solder, glue, tar, paraffin and similar materials. It is a combination floor and tank type model which produces clean flame with either propane or butane gas. It lights instantly without use of air pressure. Made by **Weldit, Inc.,** 993 Oakman Blvd., Detroit 6, Mich.

For more details circle **NED-466** on enclosed inquiry slip

ELECTRIC PLUG & OUTLET attaches to wire without tools



Five seconds are all that is required to attach slide-on type Safe T Plug and Safe T Outlet to any standard No. 18 lamp or appliance parallel cord. Wire is placed in channel on top of the molded base and the cap is slid into place. This forces internal contact point to pierce the insulation to make contact. Outlets can be removed and re-attached elsewhere without exposing bare wire or damaging cords. No tools or assembly operations are required. Made by **Gilbert Mfg. Co.,** 24-20 46th St., Long Island City 3, N. Y.

For more details circle **NED-467** on enclosed inquiry slip

MIRACLE REINFORCEMENT BASE ADDS YEARS TO FLOOR LIFE!

- MINIMUM UPKEEP
- RUGGED
- SAFE

Floorsteel Rolls Out Like A Rug!

FLOORS STILL IN PERFECT CONDITION AFTER MORE THAN 25 YEARS!...

Workmen installing Klemp Floorsteel Flexible Floor Armor for reinforcement of concrete surface.

KLEMP HEXTEEL® or FLOORSTEEL®

REINFORCED (AND INSTALLED) INDUSTRIAL FLOORS

Klemp Hexteel or Floorsteel solve once and for all the problem of solidity, smoothness, and upkeep of any floor daily subjected to the hardest, most wearing assaults of trucks bearing materials of great weight. Fabricated of heavy-duty steel grid flooring material, they are scientifically designed to be filled with concrete or mastic on old or new floors (either wood or concrete). When filled, they make a solid one-piece, rigid, smooth, and seamless mat over the entire floor area, so that the tread of the wheel is always on steel.

IMPORTANT: Before installing—Insure longer floor life and maintenance savings by consulting Klemp engineers who will gladly help you (without obligation) to make a thorough study of your flooring problems.

Send for your free copy of the informative booklet: "Instructions for laying Klemp Hexteel and Floorsteel."

KLEMP
We Tread the World with Safety

KLEMP METAL GRATING CORP.
Executive Offices: 1376 North Branch Street, Chicago 22, Illinois

For more details circle **NED-468** on enclosed inquiry slip

IMMEDIATE DELIVERY ...WHY WAIT?

TO CHECK RPM IN THEIR PLANTS LEADING INDUSTRIES

Use STICHT TACHOMETERS

UNIVERSAL TYPE U
With 5 Ranges

BECAUSE THEY ARE
- MOST ACCURATE
- DEPENDABLE
- RUGGED
- QUALITY BUILT

CAT. NO. 303	CAT. NO. 322	CAT. NO. 346
30- 120 RPM	60- 240 RPM	120- 480 RPM
100- 400 RPM	200- 800 RPM	400- 1600 RPM
300- 1200 RPM	600- 2400 RPM	1200- 4800 RPM
1000- 4000 RPM	2000- 8000 RPM	4000-16,000 RPM
3000-12,000 RPM	6000-24,000 RPM	12,000-48,000 RPM

WRITE FOR BULLETIN NO. 750

HERMAN H. STICHT CO., INC.
Tachometer Headquarters
27 PARK PLACE, NEW YORK 7, N. Y.

For more details circle **NED-469** on enclosed inquiry slip

For more details circle **NED-470** on enclosed inquiry slip

To Identify Stainless Steels

send for your Chart *Today!*

To more easily identify stainless steels that may have become mixed in stock—or stainless scrap—use Carpenter's new chart for segregating stainless steels. It diagrams and explains how and when to use each of 11 tests. Typical reactions are given for the nitric acid, magnet, spark, hardness, muriatic acid, sulphur spot, nickel spot, and stabilization tests. Return the coupon below for your copy now.

THE CARPENTER STEEL COMPANY
118 W. Bern St. • Reading, Pa.

Gentlemen: Without obligation, please send me your new chart for identifying Stainless Steels.

NAME_____ TITLE_____
(Please Print)

FIRM_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

For more details circle **NED-471** on enclosed inquiry slip

Drive out

FOUL AIR

Blow in

FRESH AIR

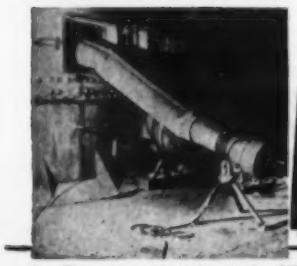
with Coppus Type A Ventilator

Assure greater safety, comfort for workers . . . get greater efficiency.

Drive out dangerous fumes, gases, stagnant or hot air from boilers, cable manholes, tanks, vats and other confined places. *Supply fresh air continuously.*

Send now for further information. Coppus Engineering Corporation, 409 Park Avenue, Worcester 2, Mass.

MANHOLES made safe for workers' entrance within minutes.



BOILER AND TANK INTERIORS cooled by Coppus. Fresh air supplied continuously.

ANOTHER COPPUS "BLUE RIBBON" PRODUCT

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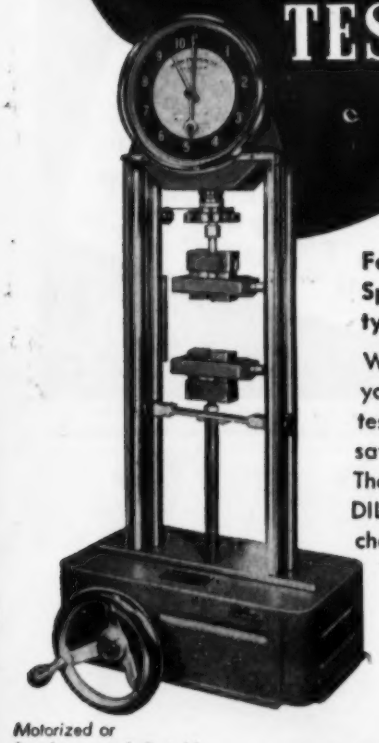
Guess Work Can Cost You Money!

Get accurate engineering data quickly with a

DILLON Universal TESTER



Motorized or hand operated. Portable.

For Flat, Round or Special Shapes in all types of materials . . .

With a DILLON TESTER you can do all your own testing in your own plant; saving time and money. There are seven different DILLON gauges, all interchangeable to handle materials with tensile strength as low as .25 lbs. or as high as 125,000 lbs. P.S.I.

DILLON UNIVERSAL TESTERS are compact, ruggedly built, accurate instruments. They are fast and easy to operate—even by untrained help.

DILLON TESTERS are used throughout the world by modern industry because they are economical and dependable, and built to last a lifetime.

Each DILLON TESTER is individually calibrated with an elastic proving ring. These rings are certified by the United States Bureau of Standards and are accurate to within 2/10 of 1%. In actual calibration, the ring is placed in direct series with the Dynamometer gauge. Stress curves are made by highly experienced technicians. Every instrument is individually checked.

FREE! Valuable Tensile Strength Computer and profusely illustrated bulletin. Call, write or wire TODAY.

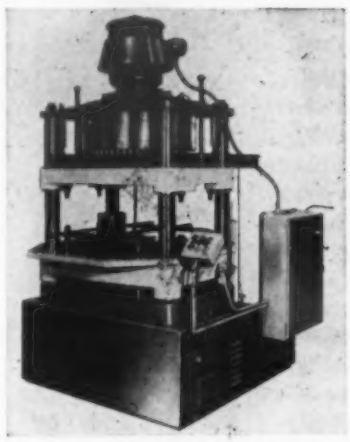
Precision Instruments for Precision Testing

W. C. DILLON & CO., Inc.

1421 NE South Circle Avenue • Forest Park, Illinois

▲ For more details circle NED-473 on enclosed inquiry slip ▲

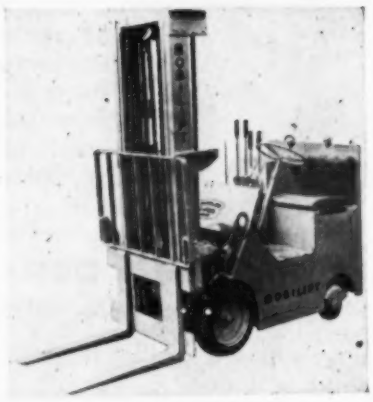
DRILLING MACHINES
designed for large hole pattern



Incorporating Zagar interchangeable drill heads, four sizes in line of heavy duty drilling machines can drill as many as 600 holes at one time. The 16, 24, 32 and 40-in. machines use the gearless drilling technique and are designed for heavy thrust and torque loads and large hole pattern. Changing machine from one job to another can be performed in a few hours. Drill heads are direct-driven by electric motors ranging from 5 to 30 hp. A hydraulic ram feeds the work up into the drills, then lowers it to the original position. Cycling can be automatic or semiautomatic. Made by **Zagar Tool, Inc.**, Dept. NE52-1, 24000 Lakeland Blvd., Cleveland 23, O.

▲ For more details circle NED-474 on enclosed inquiry slip ▲

POWER FORK LIFT TRUCK
3000-lb capacity model features independent rear wheel suspension



Reduced driver fatigue and minimized shock to vehicle and load are obtained in model HR 3000-lb capacity sit-down type fork lift truck by use of Mobil-Spring independent rear wheel suspension. Heavy duty spring and airplane type shock absorber are used on each rear wheel. Clear passage facilitates mounting and dismounting by operator. Simple Lev-R-Matic push-pull operating levers are mounted conveniently on right side. Feature of lift mechanism is full-visibility roller chain lift with hydraulic tilt cylinders.

Power is supplied by air-cooled three-cylinder engine through two-speed transmission. Improved air intake pulls engine-cooling air through grilled opening channel through counterweight. Air filter can be placed inside the grill. Thus, flywheel end of engine is readily accessible for servicing.

Standard masts are 63, 72 and 83 in., with special mast heights available on order. Made by **Mobilift Corp.**, Dept. E, 409 S. W. Thirteenth Ave., Portland 5, Oreg.

▲ For more details circle NED-475 on enclosed inquiry slip ▲

Some like them green...
Some like them clear...

AO Safety Goggles

Either Style gives Wide Vision and Comfort

AO Panoram Goggles

Workers obtain a "picture window" view of the work with AO's Panoram Goggles. Both the "600" model for large and medium size faces and the "800" for smaller faces are available in any combination of green or clear lenses or frames. Rubber cushions are available for utmost comfort when goggle must be worn for long periods of chipping, grinding, babbitting, riveting, spot welding and similar work. Your nearest AO Safety Products Representative can supply you.

Register and Vote!

American Optical Company
SAFETY PRODUCTS DIVISION

Southbridge, Massachusetts • Branches in Principal Cities

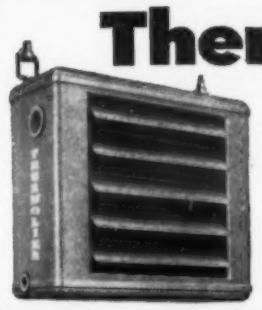
▲ For more details circle NED-476 on enclosed inquiry slip ▲

NEW ADJUSTABLE DRILL JIG
eliminates layout; cuts drilling time

Used for drilling holes through round stock and hex stock from ¼" to 2" and cap screws from ¼" to 1¼", the new Mathewson Adjustable Drill Jig eliminates layout and can cut drilling time on small lots to a fraction. And it eliminates the costs of special jigs for larger quantities. Holes for cotter pins, set screws, drive pins for bayonet joints, oil holes in tubular sections, and wiring holes in cap screws, are all typical of the operation that can be done more economically with this jig. Hole diameters range from .052" to .531", using your A.S.A. standard slip bushings. The hardened V-block has two 60-degree V's for centering round or hexagonal stock, one for ¼" to 21/32" diameter, one for 21/32" to 2" diameter. Adjustable stop for locating work longitudinally for drilling any distance from end, may be used on either side. Adjustable bushing carriers hold slip bushings and clamp work securely. Jig highly successful in permitting use of inexperienced drill operators. For circular write to: **Mathewson Machine Works**, 22 Hancock St., Quincy, Mass. *Advt.*

▲ For more details circle NED-477 on enclosed inquiry slip ▲

Thermolier



Unit Heaters

4 Models

18 Sizes

CHECK THESE PRACTICAL, MONEY-SAVING FEATURES

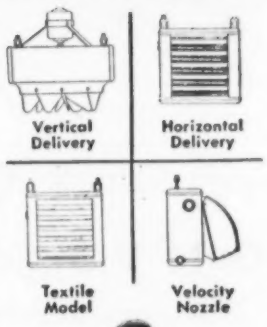
A thermostatic trap, the simplest and least expensive of all traps, is practical because of Thermolier's exclusive cooling leg.

Maximum capacity assured, annoying destructive water hammer eliminated — by built-in pitch of tubes and internal cooling leg which assure continuous drainage of condensate.

Damaging strains caused by expansion and contraction eliminated by "U" type expansion tubes.

Safety and durability assured with leak-proof tube-to-header construction.

Five other important construction features. Write for Catalog.



GRINNELL

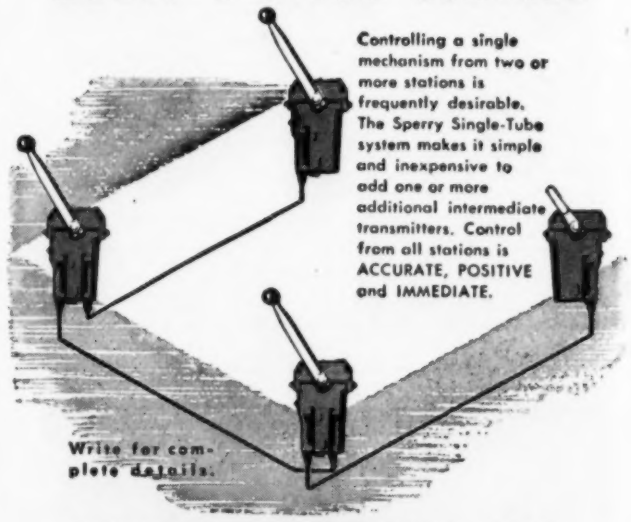
WHENEVER PIPING IS INVOLVED
GRINNELL COMPANY, INC.
Providence, R. I.

▲ For more details circle NED-478 on enclosed inquiry slip ▲

Sperry *Hydraulic* REMOTE CONTROLS

FOR AUTOMOTIVE, AVIATION, RAILROAD, MARINE & MACHINE TOOL INDUSTRIES

MULTI-STATION CONTROL



Controlling a single mechanism from two or more stations is frequently desirable. The Sperry Single-Tube system makes it simple and inexpensive to add one or more additional intermediate transmitters. Control from all stations is ACCURATE, POSITIVE and IMMEDIATE.

Write for complete details.

SPERRY PRODUCTS, INC.

1109 SHELTER ROCK ROAD, DANBURY, CONN.
REPRESENTATIVES IN PRINCIPAL CITIES

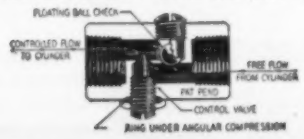
▲ For more details circle NED-479 on enclosed inquiry slip ▲

FLOW CONTROL VALVE

for Cylinder Speed Adjustments over a WIDE RANGE IN AIR OR HYDRAULIC USE

The Pneu-Trol Flow Control Valve combines an efficient Stainless Steel FLOATING BALL CHECK which opens and closes at the slightest change in flow direction, with a Vernier Type VARIABLE NEEDLE ORIFICE adjustment in a compact control which has widened air and hydraulic cylinder application by providing precise control of cylinder action. Modifications of the Pneu-Trol Valve are available as Plain Check, Check with Fixed Orifice (orifice drilled by customer in the Standard Check Valve), Needle Valve and Velocity Limiting Check. All Pneu-Trol Valves are made from bar stock in brass (up to 1000 psi) or steel (5000 psi) or other body metals to your specifications. All internal parts are Stainless. All valves available in 5 sizes—⅛", ¼", ⅜", ½", and ¾".

Attractive prices — immediate delivery. Write for illustrated circular and price list.



WRITE

Pneu-Trol Devices, Inc.
1432 N. Keating Ave., Chicago, Ill.

For more details circle **NED-480** on enclosed inquiry slip

AMERICAN ELECTRIC
Model 275
MOTOR ALTERNATOR

1000 TO 1800 WATTS
400 CYCLE POWER SUPPLY
IN LESS THAN A 2 FOOT PACKAGE!

Small, light, compact, equally satisfactory on permanent or portable installations. Low speed—quiet operation. Meets power supply requirements for AN-E-19 equipment. Multiple units efficiently replace one single, large-capacity alternator . . . Save space, cost far less, protect against breakdowns!

NEW PRINCIPLE uses no moving coils, brushes, springs etc.... *It's as completely wear-free as its ball-bearings!*

Capacities up to 1000 Watts single phase or up to 1800 Watts three phase. Single or 3 phase common-shaft motor drive. Larger capacities available.

WRITE FOR DETAILS!

AMERICAN ELECTRIC MOTORS
TRADE MARK

4811 Telegraph Road, Los Angeles 22, California

For more details circle **NED-481** on enclosed inquiry slip

LARGE OR SMALL
SHORT OR TALL

Electroline Fittings

ARE THE CHOICE OF ALL

There's an Electroline Wire Rope Fitting to suit your every need. Actual tests have proved their great holding power in all applications, regardless of size or type.

Electroline Fittings are installed easily and safely with ordinary tools—by unskilled labor in a matter of minutes—without the danger of molten metal or acids—without blow torches or special tools.

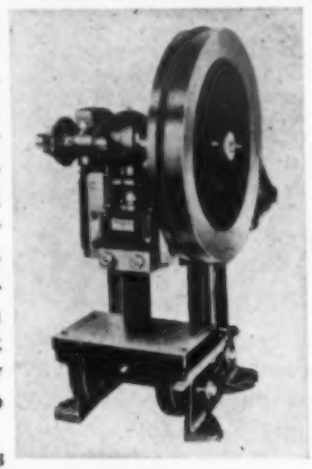
To give you the whole story of Electroline Wire Rope Fittings, we have prepared a pocket-size illustrated catalog, filled with information of sizes and types. Why not send for your copy today?

Electroline COMPANY
4121 SOUTH LA SALLE STREET
CHICAGO 9, ILLINOIS
IN CANADA: POWERLITE DEVICES, LTD., TORONTO

For more details circle **NED-482** on enclosed inquiry slip

PUNCH PRESS

5-ton model has variable speed from 90 to 290 strokes per minute



Open and closed back designs are available in 4 and 5-ton 4-in-1 punch presses which are of inclinable, deep-throat, bench or floor type. They can be converted into long type, horn or half punch press by making a few simple adjustments. Larger machines are equipped with variable speed drive that permits selection of any punching speed from 90 to 290 strokes per minute.

Deep throat permits punching to center of 25½-in. circle. Optional standard strokes are 1 and 1¼ in., with longer strokes up to 3 in. optional at extra cost. Adjustable ram clamp with square hole adjusts from 1 to 1 9/16 in. Other features are clutch drive safety which shears at excessive overload to prevent breakage, nonrepeat safety mechanism, 3-in. drop in movable bed to accommodate larger dies, and interchangeable parts.

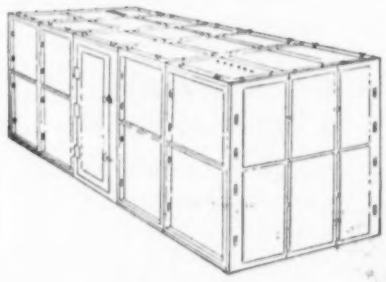
Power is supplied to flywheel by V-belt from ⅓ to ½-hp 1725-rpm motor. Made by **Kenco Mfg. Co.**, Dept. NED, 5211 Telegraph Rd., Los Angeles 22, Calif.

For more details circle **NED-483** on enclosed inquiry slip

SILENCE TEST CHAMBERS

feature double-screen design for evaluating electronic equipment

Originally designed for atomic project requirements, this portable radio silence test chamber can be used for test and evaluation of electronic equipment. It features a double-screen design in which screens are physically and electrically insulated from each other. Electrical noise or interference that penetrates the first screen is attenuated to such a degree that the second screen is practically impenetrable. Lightweight white pine panels are made in standard 31 x 91-in. dimensions. Entrance and access doors can be placed where needed. Screening is of heavy copper, attached to frame. Distance between screens is about 1⅝ in. Floor is ⅝-in. plywood. Six power line entrances are provided. Made by **Lindgren Screen Room**, Dept. S, 4515 N. Ravenswood Ave., Chicago 40, Ill.



For more details circle **NED-484** on enclosed inquiry slip

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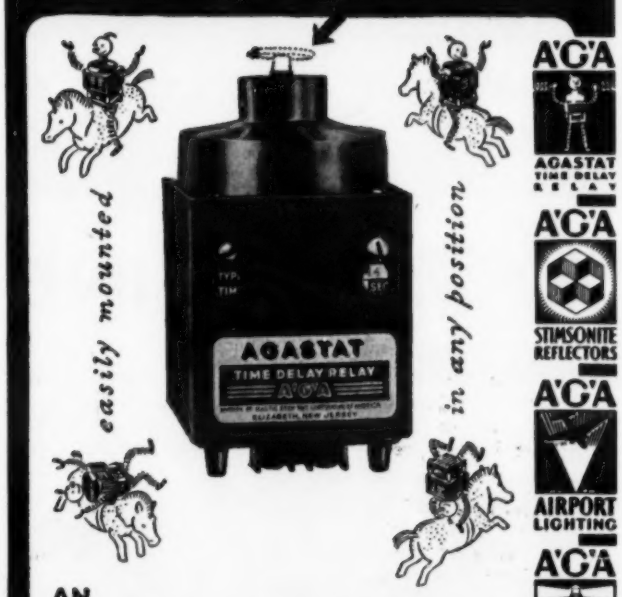
simple adjustment!
special adjusting disc available



AN **AGASTAT** TIME DELAY RELAY for every requirement

A'G'A DIVISION OF ELASTIC STOP NUT CORPORATION OF AMERICA
1027 NEWARK AVE., ELIZABETH 3, NEW JERSEY

For more details circle **NED-485** on enclosed inquiry slip

Because they wear longer...stand up better to the destructive effects of heat, abrasion, corrosion and chemical action, Wissco Metal Processing Belts have become the accepted standard for varied applications involving processing and heat treating.

They're your assurance of uninterrupted trouble-free production at a time when stoppages cannot be tolerated.

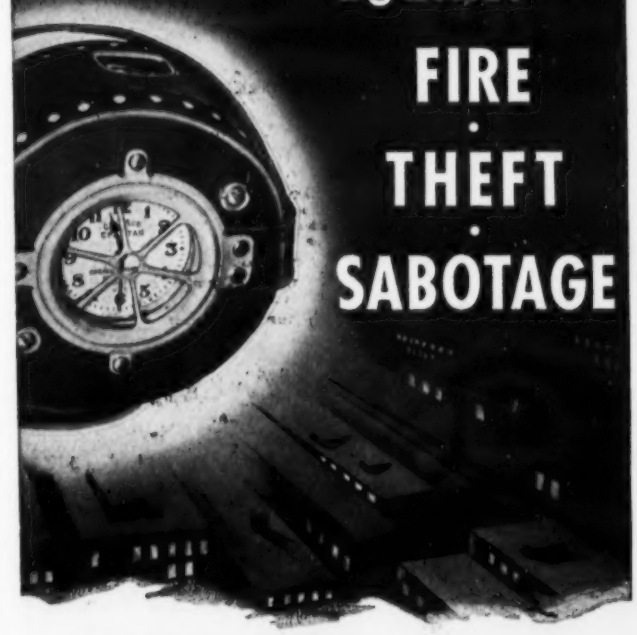
For additional information write or phone our nearest sales office.

EAST: Wickwire Spencer Steel Division, Clinton, Mass.
WEST: The Colorado Fuel & Iron Corporation, Denver, Colorado
PACIFIC COAST: The California Wire Cloth Corporation, Oakland, California

WISSCO BELTS
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION
CFI

For more details circle **NED-486** on enclosed inquiry slip

HERE'S PROTECTION against FIRE • THEFT • SABOTAGE



CHICAGO Watchclock System

"The first . . . and still the first."

LOWERS YOUR INSURANCE RATES!

It keeps track of your watchman's tracks—so accurately and positively that the CHICAGO WATCHCLOCK System is approved by THE UNDERWRITERS' LABORATORIES and by THE FACTORY MUTUALS LABORATORIES. Users earn reduced insurance rates. Thus the CHICAGO WATCHCLOCK System quickly returns its small cost to you.

Write for FREE *new folder that completely describes this simple, low-cost, tamper-proof system of extra protection to property. Write for it NOW!*

CHICAGO WATCHCLOCK
DIV. GREAT LAKES INDUSTRIES, INC.
1522 S. WABASH AVE., CHICAGO 5, ILL.
OFFICES IN PRINCIPAL CITIES

For more details circle **NED-487** on enclosed inquiry slip

New! Farquhar SUPER-ACE CONVEYOR

slashes coal handling costs!

Here's a brand *new* Farquhar Portable Conveyor with *exclusive* features *especially designed to save you time and money* in your coal handling operation. Heavy plate construction, channel iron wheel truck, closer tolerances—all give you greater strength with less weight! Bolted construction makes for easy repairs! Top-quality belting, improved pulley construction, deeper, wider return dust pan assures longer belt life! Moving parts feature ball bearings! Either chain and sprocket or V-belt drive!

Farquhar CONVEYORS SAVE YOU MONEY

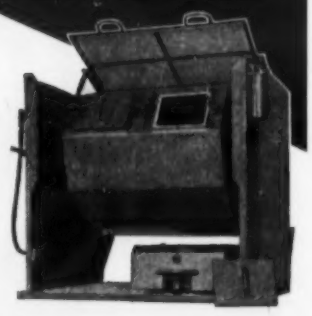
FREE — "Owners Report" booklet containing case histories of money-saving Farquhar Conveyor installations. Write: A. B. FARQUHAR CO., Conveyor Dept. S-04, 142 N. Duke St., York, Pa., or 618 W. Elm St., Chicago 10, Ill.

A. B. FARQUHAR COMPANY Division of THE OLIVER CORPORATION

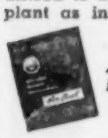
▲ For more details circle NED-488 on enclosed inquiry slip ▲

ROTO FINISH

gives you precision finishes mechanically... *at lower cost*



The original Roto-Finish can effectively convert your precision finishing operations from costly hand methods to a low cost mass production mechanical process. Only at Roto-Finish can you get the recommendations of the engineers who developed the processes for precision barrel finishing and have continued to improve them for many years . . . results guaranteed to be the same in your plant as in our laboratory.



A copy of this fact-packed catalog is waiting for you. Write today. DW 45-36-2

HERE'S WHAT ROTO-FINISHING CAN DO FOR YOU

- *Speeds up the production and efficiency of descaling, and surface improvement operations, because you finish more parts at one time and use less manpower.*
- *Cut finishing costs as much as 80%.*
- *Mechanically produces uniformly fine finishes to exact tolerances.*
- *Reduce maintenance expenses.*

Roto-Finish COMPANY

associated with The Sturgis Products Co.

3702 Milham Rd., Kalamazoo, Mich., P. O. Box 988, Ph. 3-5578

ORIGINATORS OF THE ROTO-FINISH PROCESS

▲ For more details circle NED-489 on enclosed inquiry slip ▲

50,000-KVA INTERRUPTING CAPACITY

ALLIS-CHALMERS TYPE D-20 INDOOR OIL CIRCUIT BREAKERS

★7200 Volts — 600 Amps
★4160 Volts — 1200 Amps

THESE TIME-PROVED switchboard-type breakers meet both electric power utility and industrial requirements. They are supplied with simplified trip-free operating mechanisms for either manual or electrical operation.

Special-alloy arcing contacts, silver-plated low resistance current carrying contacts, and *Expulsion Port* arc extinguishers provide reliable performance with low maintenance.

For general specifications, send for Bulletin 71B6023. Other A-C types start at 2500 volts, 15,000 kva i.c.

A-3795

Expulsion Port is an Allis-Chalmers trademark.

ALLIS-CHALMERS

MILWAUKEE 1, WISCONSIN

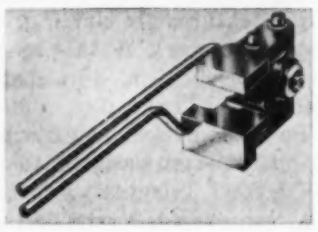
▲ For more details circle NED-490 on enclosed inquiry slip ▲

DRUM TRUCK
lifts, moves full coverless drums

Safe lifting and transporting of full drums with cover removed is possible with Drumobile drum handling unit. Truck is moved around drum or barrel and its handle is moved downward after engaging the top of the drum. This lifts it off the floor. Unit will handle up to 850 lb, and heavier capacity models can be made. Steel and rubber tired wheels are available, as are special non-sparking trucks. Made by **Kist Machine Co.,** 1002 E. Ferry St., Buffalo 11, N. Y.

▲ For more details circle NED-491 on enclosed inquiry slip ▲

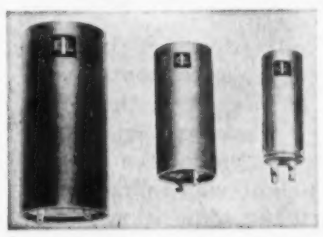
DRILL JIG
for accurate drilling on small parts



Easily adapted to various size parts within its range up to 1½ in., Jr. Mijit precision drill jig can be used for accurate drilling on extremely small parts. It is self-clamping in any position, using the same handles for locking the part and for locating and holding the fixture under the drill. All working parts are hardened and ground. Interchangeable bushing plates make it unnecessary to buy a new jig when drilling a new part. Shut height is infinitely variable from 1 to 1½ in. and working area is 1 x 1⅛ in. Handles are 6 in. long. Made by **Esco Engineering Corp.,** 1940 E. Woodbridge St., Detroit 7, Mich.

▲ For more details circle NED-492 on enclosed inquiry slip ▲

MOTOR STARTING CAPACITORS
supplied in 24 to 220-v ac ratings



Built-in features of line of electrolytic motor starting capacitors include low power factor and wide temperature range. Shockproof construction assures long life under severe vibration. Connecting terminals and foil are of heavy construction and are corrosionproof. Supplied in round aluminum containers with insulating sleeve, capacitors are for 50-60 cycle operation and are furnished in wide range of capacities in ratings from 24 to 220-v ac. Made by **Illinois Condenser Co.,** Dept. A, 1616 N. Throop St., Chicago 22, Ill.

▲ For more details circle NED-493 on enclosed inquiry slip ▲

NOW...

FAST, ACCURATE SET-UPS FOR ANGULAR GRINDING

Magna-Lock SINE

WHAT IT IS: An electro-magnetic chuck for making precision angular set-ups on surface grinders. Standard gauge blocks insure maximum accuracy. No dials, no scales. Rugged precision-made hinge is only moving part.

WHAT IT DOES: Single or compound angle set-ups made in minutes. Work held securely . . . powerful magnetic attraction minimizes distortion or warpage during machining operation.

Get full details now. Write Dept. ND-92

MAGNA-LOCK, INCORPORATED

Magna-Lock

Magnetic Chucks and Devices

BIG RAPIDS, MICHIGAN, U. S. A.

▲ For more details circle NED-494 on enclosed inquiry slip ▲

a MATERIAL to suit your requirements

Industrial fastener users have long known they can call on Lamson & Sessions for almost any fastener product.

But did you know that many Lamson products are available in brass, bronze and aluminum alloys, as well as steel?

Yes, Lamson's *complete line* means just that . . even to a choice of materials.

So make it a point to check with Lamson for *all* fasteners in any material.

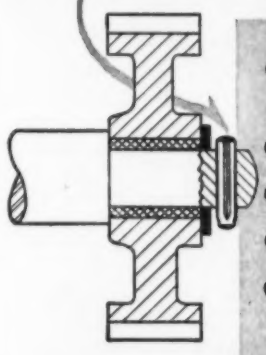
Lamson & Sessions

The LAMSON & SESSIONS Co.
1971 West 85th St. • Cleveland 2, Ohio
CLEVELAND and KENT, OHIO • BIRMINGHAM • CHICAGO

▲ For more details circle NED-495 on enclosed inquiry slip ▲

DRIV-LOK PINS

LOWER ASSEMBLY COSTS IMPROVE YOUR PRODUCT!

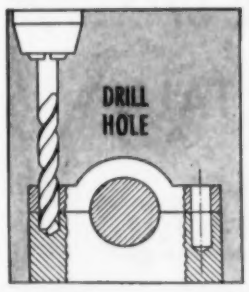


- Require Only Drilled Hole—No Taper or Size Reaming Necessary
- Vibration and Shock-proof
- Low Material Cost
- Wide Selection of Materials
- Types for Most Applications

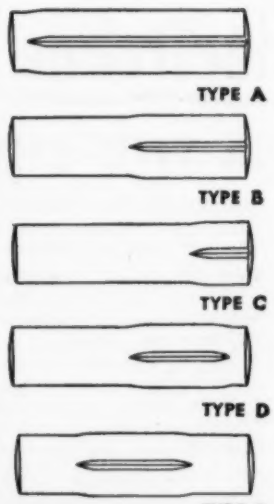
TYPE "A"

these simple steps

1



2



DRIV-LOK Pins can be quickly pressed or driven into a drilled hole . . . will remain locked in place, regardless of shock or vibration. Type "A" (illustrated above) has wide application as substitute for cotter pins—is used to key sprockets, gears, collars, knobs, handles, levers and wheels to their shafts.

DRIV-LOK Pins are made of carbon steel, stainless, alloy and brass in many types; diameters from 3/64" to ½", and can be heat treated or plated to your specifications. Write for illustrated catalog and samples—giving nature of your fastening problem.

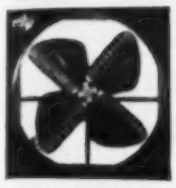
DRIV-LOK PIN COMPANY
717 Chauncey St. • Sycamore, Ill.

▲ For more details circle NED-496 on enclosed inquiry slip ▲

EMERSON ELECTRIC

EXHAUST FANS

for COMPLETE ventilation of commercial, industrial and institutional buildings



Belt-Drive Exhaust Fans with 24- to 48-inch blades

Direct-Drive Exhaust Fans with 12- to 30-inch blades

In this complete line of exhaust fans, you'll find the right model for the majority of air-moving jobs . . . *right* blade size . . . *right* capacity . . . *right* mounting for installation at any angle.

And ALL Emerson-Electric Exhaust Fans provide quiet, trouble-free performance season after season. Each unit is backed by 62 years of precision design and manufacturing experience.

For further information write today for Bulletin No. T77.

THE EMERSON ELECTRIC MANUFACTURING CO.
St. Louis 21, Mo.

EMERSON ELECTRIC
FANS • MOTORS APPLIANCES

▲ For more details circle NED-497 on enclosed inquiry slip ▲

Continuous One Man Operation With AMERICAN MONORAIL

Here's an operation that must be on the go, all the time and fast, and yet, one man plus an American MonoRail Crane keeps the line flowing smoothly and fast. Fast operating, constant service, American MonoRail Cranes are ruggedly built to handle loads up to 10 tons at operating speeds of 500 feet per minute. Articulated trolleys assure perfect alignment of trucks for smooth crane travel.

Let an American MonoRail engineer explain all the advantages of these constant service cranes.

THE AMERICAN MONORAIL COMPANY
13116 Athens Avenue • Cleveland 7, Ohio

▲ For more details circle NED-498 on enclosed inquiry slip ▲

New di-acro POWERSHEAR

offers CONTINUOUS ACTION *plus* VARIABLE SPEED *from 30 to 200 strokes per minute*

For high Speed

DIE-LESS DUPLICATING

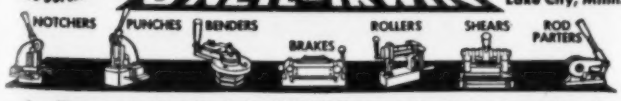
The new Di-Acro POWERSHEAR has remarkable speed and accuracy for the production of small parts and pieces. Consider these points: **1. CONTINUOUS SHEARING ACTION**—no clutch to engage! Feeding speed determines shearing speed. **2. VARIABLE SPEED**—cutting cycle quickly set for each shearing operation. **3. EASE OF OPERATION** — fatigue is reduced, accuracy increases, production soars. **4. "SINGLE STROKE" SHEARING**—non-repeating safety clutch for jobs not adaptable to continuous shearing.

Any plant doing high speed precision work on smaller parts from any shearable material cannot afford to be without the DI-ACRO POWERSHEAR. Available in 12" and 24" shearing widths, capacity 16 gauge sheet steel. Also standard model.

SEND FOR 40 PAGE "DIE-LESS DUPLICATING" CATALOG giving full details on Di-Acro Powershears, also Di-Acro Benders, Brakes, Rod Parters, Rollers, Notchers and Punches.

DI-ACRO PRECISION MACHINE TOOLS DIE-LESS DUPLICATING

O'NEIL-IRWIN
354 8th Ave. Lake City, Minn.



▲ For more details circle NED-499 on enclosed inquiry slip ▲

DICTATION SYSTEM
single recorder services many desks

One secretary and one recorder can handle the dictation of an unlimited number of persons who make only occasional use of this network dictation system. Transcription of completed dictation can proceed while additional work is being recorded. Cost of installation and maintenance is low. System uses Peirce dictation and transcribing equipment and has provision for listening and playing back, making corrections and indicating the end of correspondence from the remote location. No one can listen in or interrupt while the recorder is in use. A signal shows when the line is busy. Made by **Peirce Dictation Systems,** 1330 Sherman Ave., Evanston, Ill.

▲ For more details circle NED-500 on enclosed inquiry slip ▲

HAND LIFT TRUCK
has hydraulic load release

Easily operated with one hand, the Mac-Lift single stroke mechanical hand lift truck is designed for capacities up to 1000 lb. Truck has a hydraulic load release and is available in 14½ and 18-in. widths. Overall length of both models is 46 in. Lift of platform is 1½ in. and height in rest position is 7¼ in. Trucks have ball bearing wheels and weigh 70 and 80 lb, respectively. Made by **Orchard Mfg. Co.,** 1502 Elm St., Easton, Pa.

▲ For more details circle NED-501 on enclosed inquiry slip ▲

HAIR NET VISOR
protects all of the hair

All of the hair is protected against hazards of revolving machine components by the full wide back of this hair net visor designed for women workers in industrial plants. Green opaque visor eliminates glare from overhead lighting and reflections, relieving eye strain. Extremely lightweight and cool to wear, visor is available in white, black, red, green and maize colors and fits all head sizes. Made by **General Scientific Equipment Co.,** 2701 W. Huntingdon St., Philadelphia 32, Pa.

▲ For more details circle NED-502 on enclosed inquiry slip ▲

RE-NU TOP
STEEL-BOUND
SKID PLATFORMS

BUILT TO LAST A LIFETIME

500 LB. LOAD UP TO 10 TONS

Designed to fit your loads and equipment. Plain bolted construction for use with hand lift trucks or bolted and welded under frame with armored ends for rough handling by powered trucks. Special purpose skids can be equipped with end racks, shelves, stake pockets, crane hooks, rounded corners and other special features.

SECTIONAL BINS ROLLAWAY SKIDS SKID-BOXES

THE LANHAM COMPANY
Magnolia & 12th Sts., Louisville, Ky.

▲ For more details circle NED-503 on enclosed inquiry slip ▲

Better FLOOR PROTECTION BEGINS WITH ALBION CASTERS!

Albion casters offer you greater floor protection, smoother handling over all types of floor surfaces, plus additional ease in transporting heavier loads with complete safety. A.I. casters pay-off in reduced maintenance. They're better-built . . . engineered for the job!

Available in a size, style, capacity and wheel type in both swivel and rigid models to meet every conceivable industrial application. It will pay you well to specify the best...specify Albion Industrial Casters.

Write today for your free copy of the big new Albion Caster catalog.

Represented in Canada by: C. J. McDONALD, 365 Yonge St., Toronto

ai ALBION INDUSTRIES, Inc.
ALBION, MICHIGAN

▲ For more details circle NED-504 on enclosed inquiry slip ▲

Forming metals in press equipped with draw dies fabricated from Formica "Gauge-wood."

NEW TOOLS FOR METAL FORMING

There's a new source of tools for the metal working industries—*densified wood,* product of the union of wood and BAKELITE Phenolic Resins. Aircraft part templates, bearings, automotive part dimension gauges, drill jigs, and foundry patterns are already being made from this unusual material. Its advantages—high impact strength, comparatively light weight, ease of repair, and economy.

Densified wood, in the form known as Formica "Gauge-wood," is made into tools that maintain their exact size and shape under variable conditions of heat and moisture. It is dimensionally stable, resistant to water, chemical attack, abrasion and warping. It can be bored, threaded, tapered, grooved or machined to close tolerances, then buffed to a high surface luster. It may be altered or repaired quickly and economically by patching.

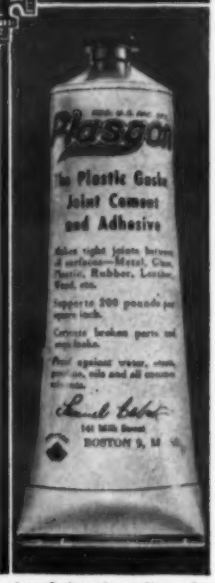
Selected cross-laminated veneers are impregnated with BAKELITE Phenolic Resins and pressed to 50% of the original thickness to form densified wood, making it a hard, compact, wood-resin structure. Harder than any solid wood, lighter than any solid metal, it is well suited to jobs requiring strength, stability, and accuracy. It may be useful in your operations. For information, write Dept. DZ-53, requesting a copy of booklet H-12, "Densified Wood Made with BAKELITE Phenolic Resins."

BAKELITE
TRADE-MARK
PHENOLIC RESINS
TRADE MARK
BAKELITE COMPANY
A Division of
Union Carbide and Carbon Corporation
UCC
30 East 42nd Street, New York 17, N. Y.
In Canada:
Bakelite Company (Canada) Ltd., Belleville, Ont.

▲ For more details circle NED-505 on enclosed inquiry slip ▲

FOR PIPE JOINTS Plasgon

THE PIPE JOINT CEMENT THAT STAYS FLEXIBLE, ABSORBS SHOCKS AND VIBRATION



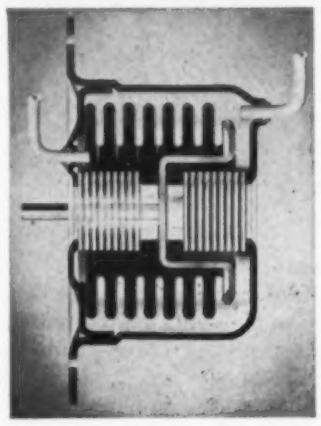
Make Plasgon part of your Maintenance Department. It's an ideal all-purpose industrial adhesive . . . seals pipe joints permanently. Impervious to oil, gasoline, glycol, steam, all common solvents. Resists heat up to 350° F. and withstands considerable pressure. Good for making emergency plastic gaskets. Keep Plasgon handy.

Write today for free sample and complete information.

SAMUEL CABOT, INC.
932 Oliver Bldg., Boston 9, Mass.

For more details circle NED-506 on enclosed inquiry slip

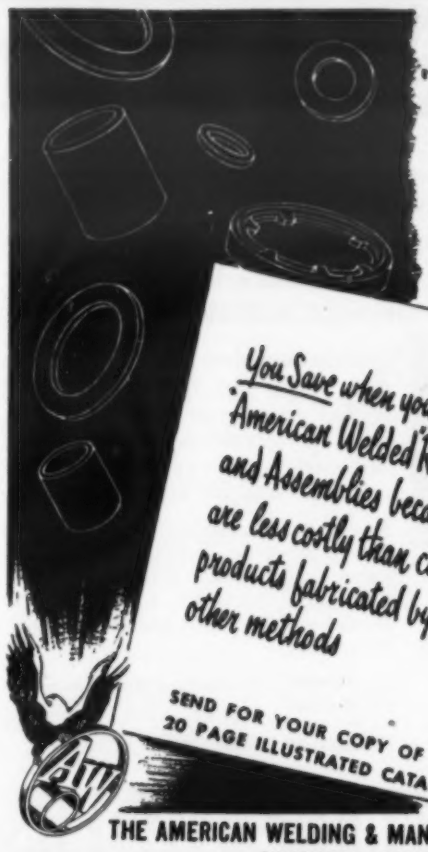
BELLOWS ASSEMBLY
maintains absolute pressure by means of single-unit control



Originally developed for jet plane fuel systems, single unit type bellows assembly makes possible the maintenance of absolute pressure by means of a single-unit control. Industrially, device is applicable to thermostatic or pressure switches which must not be affected by barometric changes, altitude or other factors. It can be used also in processes in which the pressure within a closed system must be equalized automatically or where absolute pressure must be maintained. Other uses include indication or control of flow.

In operation, two differential pressures are applied to opposite sides of large bellows in center of unit. One tube allows pressure to be exerted against inside surface of bellows. Second tube permits pressure to be applied to outside surface. Since inside and outside pressures act on same effective areas, resultant force produced by difference between inside and outside pressures can be used through center of unit to actuate switches, valves or other controls. Two smaller bellows seal ends of main bellows. Made by **Clifford Mfg. Co.**, 124 Grove St., Waltham 54, Mass.

For more details circle NED-508 on enclosed inquiry slip



GO "AMERICAN" FOR CIRCULAR WELDED PRODUCTS

You Save when you specify "American Welded" Rings, Bands and Assemblies because they are less costly than circular products fabricated by other methods

SEND FOR YOUR COPY OF OUR 20 PAGE ILLUSTRATED CATALOG

THE AMERICAN WELDING & MANUFACTURING CO.
WARREN, OHIO

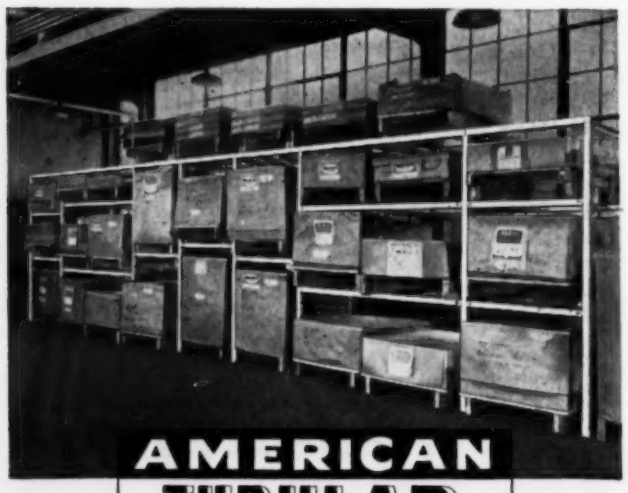
For more details circle NED-511 on enclosed inquiry slip

The ONE and ONLY adjust-o-matic RACK

AMERICAN
RATCHET RACK
adjustable without bolting

. . and the rack-shelf is in position

- No waste space . . . more storage space per sq. ft.
- Built for any size pallet skid or box.
- Let us tell you more . . . send for literature.

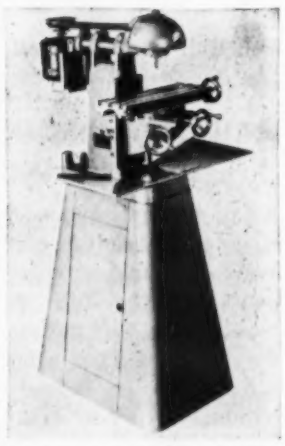


AMERICAN TUBULAR MATERIALS HANDLING EQUIPMENT
PRODUCED BY
BORROUGHS MFG. COMPANY

AMERICAN SALES ENGINEERS
5959 Linsdale • Detroit 4, Michigan

For more details circle NED-507 on enclosed inquiry slip

PEDESTAL & SPLASH TRAY
now available with milling machine

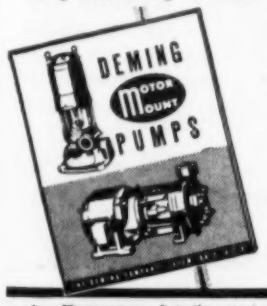


A 30-in. high pedestal, made from rolled sheet steel, and a steel splash tray which diverts coolant to sump return is now available with the Benchmaster milling machine. Pedestal's top matches base dimensions of the mill. Inside area accommodates M-21 coolant system or can be used for storage. The splash tray, designed to fit base of both horizontal and vertical millers, is of a size to afford protection over full table extensions both longitudinally and transversely. Edges are rolled and beaded for strength and elimination of sharp corners. Flanges aid fastening to base. Made by **Benchmaster Mfg. Co.**, Dept. NED-8, 1835 W. Rosecrans Ave., Gardena, Calif.

For more details circle NED-509 on enclosed inquiry slip

DEMING CENTRIFUGAL MOTOR-MOUNT PUMPS

Design of these units permits mounting pumps on any motor which has NEMA Type "C" mounting flange. Two types "Vertical" and "Horizontal." Enclosed type impellers. Stainless steel pump shafts. Capacities up to 200 g.p.m. Heads up to 165 feet.



Send for Bulletin No. 4350
Three-color bulletin shows construction features and performance range of each of 25 sizes. Graphic charts simplify selection of specific units. Write for Bulletin No. 4350.

THE DEMING COMPANY
520 BROADWAY
SALEM, OHIO

For more details circle NED-512 on enclosed inquiry slip

NEW MASKING METHOD
for SPRAY PAINTING • PLATING • SAND BLASTING

PRE-CUT SELF-STICKING **QUIK-MASKS**

Hundreds of plants now using Brady QUIK-MASKS are saving time and money **by completely eliminating** costly hand work, use of stop-off materials and metal shields. QUIK-MASKS are **pre-cut to the exact size and shape you need.** Protect name plates, machined parts, plated and polished sections, holes, threads, etc., from paint, plating and cleaning solutions, oils, acids and sand blasting.

QUIK-MASKS are pre-cut from special "SCOTCH" brand plating and masking tapes. They stick without moistening—are quickly applied and removed. Circles, squares, rectangles, hexagons, letters and numerals stocked in many sizes. Nameplates and other specials made to your exact requirements.

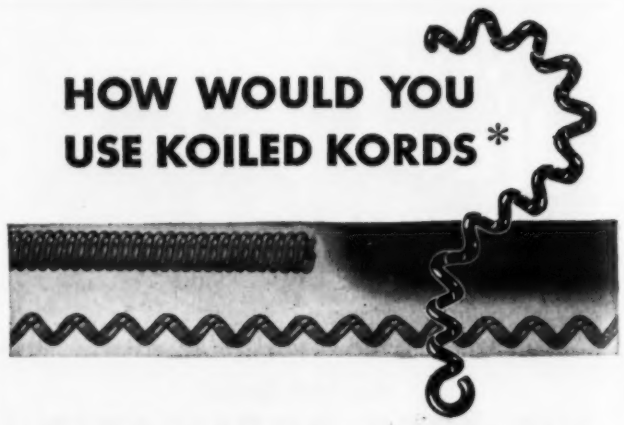
FREE SAMPLES

DISTRIBUTORS IN OVER 125 PRINCIPAL CITIES

MANUFACTURERS OF SELF-STICKING PRODUCTS
W. H. BRADY COMPANY
1641 E. SPRING STREET • CHIPPEWA FALLS, WIS.

For more details circle NED-510 on enclosed inquiry slip

HOW WOULD YOU USE KOILED KORDS*



Koiled Kords are retractile electric cords that extend to approximately five times their coiled length and retract to their original shape and size.

Koiled Kords are made under a patented process that eliminates sagging or bagginess — the coil is always tight when retracted, yet it extends easily to its full length. Koiled Kords have innumerable uses in communications, home and industry — **HOW WOULD YOU USE THEM?** *trade mark

Write on your business stationery for a sample of Koiled Kords.

Koiled Kords INCORPORATED
BOX K, HAMDEN, CONNECTICUT
IN CANADA: R. D. FLECK & CO., LTD., OSHAWA, ONTARIO

For more details circle NED-513 on enclosed inquiry slip

For more details circle NED-514 on enclosed inquiry slip

CONVEYOR

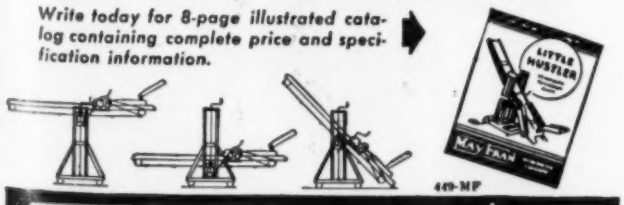
Portable, adjustable, versatile . . . LITTLE HUSTLER solves materials handling problems. It can be spotted instantly wherever needed and is particularly useful where working heights and layouts are subject to frequent change.

Usable either as an independent unit or as an auxiliary to permanent conveyor installations, LITTLE HUSTLER handles small and medium-size metal parts including cut-offs, blanks, formed stampings, etc.

This conveyor can be adjusted to any angle from horizontal to maximum of 45° by means of crank handle. Working height is regulated through 30-inch range by double-screw center lift.

LITTLE HUSTLER features all-steel-welded construction, charging chute with positive trap, and two swivel and two stationary casters. Standard belting is neoprene-impregnated fabric. For applications involving excessive wear, MAY-FRAN hinged-steel belting can be supplied for greatly increased belt-life. Also available in the MAY-FRAN line of conveyors is the semi-stationary Model S LITTLE HUSTLER, which is specifically designed for applications in which complete portability and adjustability are not required.

Write today for 8-page illustrated catalog containing complete price and specification information.



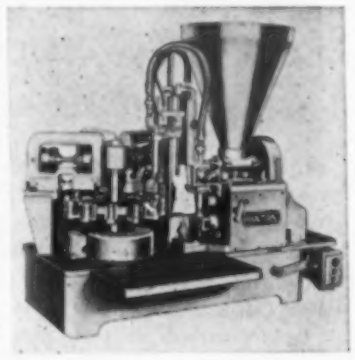
MAY-FRAN ENGINEERING, INC.

1711 Clarkstone Road • Cleveland 12, Ohio

For more details circle NED-515 on enclosed inquiry slip

TUBE FILLER

handles cream, paste, liquid, powder

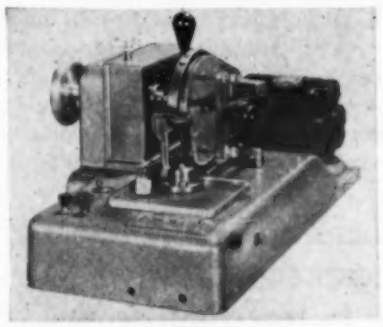


Heavy construction necessary for handling such materials as caulking compounds is incorporated in bench type Colton tube filler. It also dispenses every consistency of cream, paste, liquid and powder into tubes, jars, bottles or cans. The low priced No. 160 machine can be placed on any suitable bench, but a leg assembly is available. It is semiautomatic and requires only one attendant. Capacity is 36 tubes per minute, with tubes ranging from ⅜ to 1½ in. diameter and up to 7 in. long. Cylinder capacity is 7 fluid ounces and hopper capacity is 15 gal. Water-jacketed hopper with thermostatically controlled electrical heating is extra equipment, as is a stirring device. Made by **Arthur Colton Co.**, 3400 E. Lafayette Ave., Detroit 7, Mich.

For more details circle NED-516 on enclosed inquiry slip

TOROIDAL COIL WINDER

bench type machine produces wide range of sizes from 24 to 41 wire



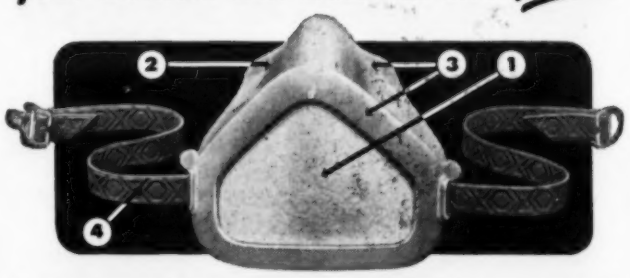
Easily adjusted to wind any segment or arc up to 345 degrees, model TW-A toroidal coil winder winds in layers and reverses automatically at each extremity. Both automatic winding traverse and overriding pushbutton manual control are standard in this machine which handles coil sizes as small as 0.187-in. finish-wound inside diameter. Other winding heads can be supplied to produce larger coils.

Adjustable winding head can be moved forward or back on wide arc and also from left to right to position the shuttle in accordance with winding requirements. The 5-in. shuttle winds wire sizes 24 to 36, and with care, wire as fine as 41 can be accommodated. De-Reeler tension is supplied for handling spools with diameters to 6 in.

Winding speed is up to 800 turns per minute. Slow-start feature avoids breakage when winding very fine wire. Power is supplied by ⅛-hp 60-cycle motor. Electric counter indicates actual shuttle revolutions. Built-in lubrication system is used. Made by **Geo. Stevens Mfg. Co.**, 6024 N. Rogers Ave., Chicago 30, Ill.

For more details circle NED-517 on enclosed inquiry slip

4 Reasons why FLEX-A-FOAM (and only FLEX-A-FOAM) provides Dust Protection your workers will welcome and Wear



1. Pure latex washable filter purifies the air of non-toxic nuisance dusts as small as 1/25000 of an inch — yet it's easier to breathe and talk through than an ordinary pocket handkerchief! Out-wears throw-away type filter as much as 100 to 1.

2. Perfectly contoured for self-adjusting fit to every size and shape of face—designed for wear with spectacles or goggles with perfect comfort.

3. Positive-locking frames of polyethelene plastic, so flexible and tough they're unbreakable in normal usage. Complete mask weighs only 1 ounce. Attractively styled to suit the most discriminating wearer.

4. Defiance non-skid, natural rubber head-band with adjustable hook-and-eye fasteners holds mask firm and comfortably snug without tension or hair-pulling.

FLEX-A-FOAM FILTER MASK

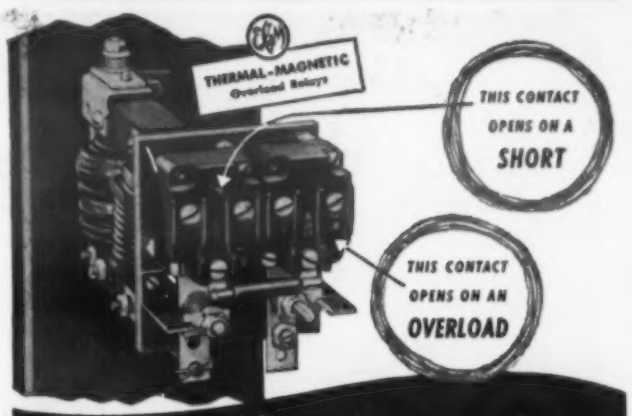
Sample $1.40 postpaid

★

Write for new descriptive folder

THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

For more details circle NED-518 on enclosed inquiry slip



Independent trips save electrician's time in locating trouble

¾ rear view shows *independent* thermal and magnetic tripping elements — *both are adjustable.* Relay is front-connected, removable as a unit from the mounting-base.

When a motor stops, the electrician soon finds an over-current or a fault has caused the shutdown. EC&M THERMAL-MAGNETIC Overload Relays have independent thermal and instantaneous tripping elements operated from *one magnetic source.* Contacts are also independent with the instantaneous-element regularly furnished with hand-reset contacts. A quick look distinguishes between wiring trouble and motor overloading—*cuts downtime up to half.*

Write Today For NEW Bulletin 1180-339

THE ELECTRIC CONTROLLER & MFG. CO.
2698 EAST 79TH STREET • CLEVELAND 4, OHIO

For more details circle NED-519 on enclosed inquiry slip

HIGH PRECISION

Thermistors

from a high precision source

BENDIX FRIEZ

made to your order for resistance values • size • temperature coefficient • mountings • quality

Widely useful as temperature measuring elements and as liquid level sensors, these temperature responsive resistors are built by Bendix-Friez under a system of quality controls set up to meet exacting military standards of accuracy. You can count on them as the very best obtainable, whether purchased from stock or made to your own specification. Ask for a list of applications.

Typical application in capsule form for temperature sensing of hydraulic oil.

STANDARD TYPES IMMEDIATELY AVAILABLE

Size (inches)	@ +30°C.	@ 0°C.	@ −30°C.
.140 x ¾	45 ohms	86 ohms	194 ohms
.040 x 1.5	12,250 ohms	26,200 ohms	65,340 ohms
.018 x 1.5	35,000 ohms	82,290 ohms	229,600 ohms

Write for details to Dept. I

FRIEZ INSTRUMENT DIVISION of Bendix AVIATION CORPORATION
1324 Taylor Avenue • Baltimore 4, Maryland
Export Sales: Bendix International Division, 72 Fifth Ave., N.Y. 11, N.Y.

For more details circle NED-520 on enclosed inquiry slip

NOW YOU CAN HAVE TIME RECORDED

THE NEW Simplex TIME RECORDER

• Vertical or Horizontal Print • Two Color Registration • Trigger-touch Print • Direct Subtraction • One-Minute Positioning • Attractive, Indestructible Case • This NEW Simplex Time Recorder figures payrolls easier, 50% faster — cuts payroll costs in half.

ACCURATELY AUTOMATICALLY EFFICIENTLY

SIMPLEX TIME RECORDER CO., Gardner, Mass., Dept. N11

Please give us more information on:

☐ Payroll Recorder ☐ Time Cards ☐ Electric Time Stamp
☐ Watchman's Clock ☐ Time Card Files ☐ Time Card Racks

Firm_____
Name_____
Street & No._____
City_____ State_____

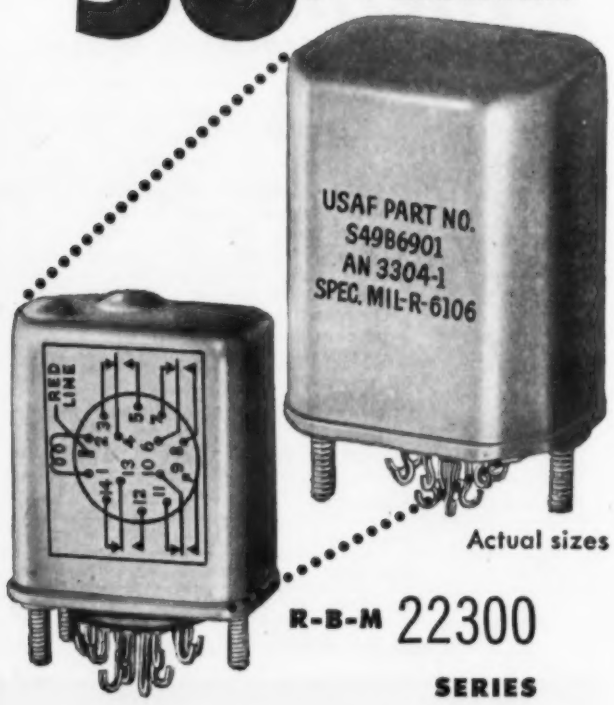
For more details circle NED-521 on enclosed inquiry slip

JEFFREY

ESTABLISHED 1877
THE JEFFREY MANUFACTURING CO.
952 Fourth St., Columbus 16, Ohio

For more details circle NED-522 on enclosed inquiry slip

50% SMALLER LIGHTER



Actual sizes

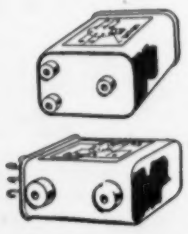
R-B-M 22300 SERIES

Hermetically Sealed Relays

The R-B-M 22300 hermetically sealed telephone type relay is the electrical and mechanical equivalent of AN 3304-1, except for smaller size and mounting dimensions.

An improved armature design, plus high temperature molded nylon coil bobbin, provides greatly improved magnetic efficiency and enables R-B-M to reduce the overall size of the relay. The R-B-M 22300 design still retains palladium cross-bar contacts identical to those used in the larger size.

Maximum contacts—6 Form A and 4 Form C—3 ampere 28 Volts. D. C. coil construction only. Maximum coil resistance 5000 ohms. Minimum power .75 watts. Also available in AN 3304 can for dynamotor or low capacitance application.



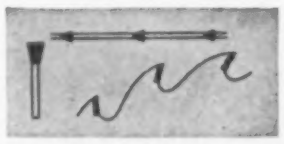
Optional Mounting Arrangements

Write Dept. K-9 for ASR Bulletin.

R-B-M DIVISION
ESSEX WIRE CORP.
Logansport, Indiana
MANUAL AND MAGNETIC ELECTRIC CONTROLS
FOR AUTOMOTIVE, INDUSTRIAL, COMMUNICATION AND ELECTRONIC USE

For more details circle NED-523 on enclosed inquiry slip

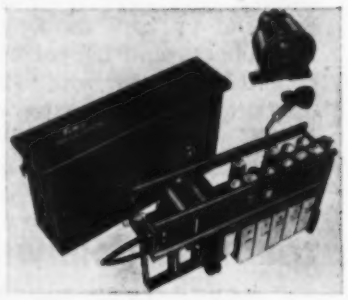
CARBIDE-TIPPED SAW
offered in 6 to 36-in. diameters



Wood, fiberboard, laminates, plastics and highly abrasive materials as well as nails wire and other obstructions are cut readily and smoothly with line of carbide tipped circular saws. Life is reported to be 25 to 100 times that of conventional blades between resharpenings. Cutting tips are chisel faced and cut on both sides of the kerf. No set is used. Made by **Rockwell Tools, Inc.**, 1310 Kinnear Rd., Columbus 8, O.

For more details circle NED-524 on enclosed inquiry slip

COMMUNICATION SYSTEM
can be installed in mobile equipment



Plug-in components incorporated in 2550 series Femco Trolleyphone make possible quick servicing with a minimum of downtime. Devised for use in fork lift trucks, yard locomotive, crane, elevators and other mobile equipment, the system consists of transreceiver units which incorporate both transmitters and receivers, speakers and microphones. Each station has press-to-talk microphone and speaker with automatic volume control. Power is taken from trolley wire or power line of either 250 or 550 v dc, 110 or 220 v ac (single or three-phase) or from 6 to 40-v batteries. Made by **Farmers Engineering & Mfg. Co.**, Dept. G, 549 Brushton Ave., Pittsburgh 21, Pa.

For more details circle NED-525 on enclosed inquiry slip

AUTOMATIC LOCKERS
no handles to mar flush fronts

The key doubles as a handle for this Key Control steel locker which features the Berger three-point full-length latching bar for positive locking and resistance to prying. Locker is equipped with a 14-tumbler Duolock and two keys. Each locker installation is complete with master key to fit all locks. Door is unlocked by inserting and turning key, prelocks when key is removed, and locks automatically when door is closed. Noise is kept at a minimum. Made by **Republic Steel Corp.**, Berger Mfg. Div., 1000 Belden Ave. N. E., Canton 5, O.

For more details circle NED-526 on enclosed inquiry slip

You cut handling time to the bone with Bond built-for-the-job CASTERS

136-A Series. Double Ball Race Swivel Caster equipped with roller bearing semi-steel wheels. Easy swiveling. Pressure lubricated. Wheel sizes from 4" to 12" dia.; load capacities from 600 to 1700 lbs. per caster.

BOND FOUNDRY & MACHINE CO.
Manheim, Pennsylvania

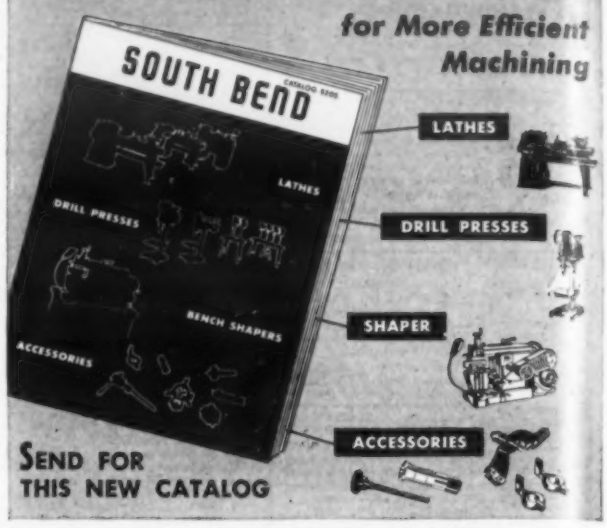
By design, by materials, by workmanship, Bond Industrial Truck Casters are the key to *low cost-high profit* parts handling. These are the casters that ably meet *any service condition*. Loads can be sturdy or fragile, heavy or light. Hauls can be long or short. Aisles can be broad or narrow. Turns can be easy or sharp.

Remember—the *right* Bond Casters will *cut your materials handling time to the bone!*

Get the story straight . . . leading industrial distributors throughout the country will be glad to give you complete information or write for your copy of the Bond Catalog K-38.

For more details circle NED-527 on enclosed inquiry slip

SOUTH BEND
LATHES • DRILL PRESSES • SHAPERS
for More Efficient Machining



SEND FOR THIS NEW CATALOG

Complete in every detail, this new South Bend catalog is a valuable reference book which every shop man should have. Send for your copy today.

Engine Lathes — 9", 10", 13", 14½", 16" and 16-24" swing.
Bench Lathes — 9" and 10" swing.
Toolroom Lathes — 10", 13", 14½" and 16" swing.
Turret Lathes — ½" and 1" collet — 9", 10", 16" swing.
Drill Presses — 14" Precision, Economy and Production models.
Shaper — 7" bench model with or without stand.
Accessories — for lathes, drill presses, shapers.

SOUTH BEND LATHE • South Bend 22, Indiana

For more details circle NED-528 on enclosed inquiry slip

Left— Union Special Style 20100 H Bag Closing Machine

Here's how to close MULTIWALL PAPER BAGS

FOR lower production costs ... stronger, neater closures ... ability to get out rush orders in a hurry, you can't beat Union Special Bag Closing Machines! Specially built to stand up under heavy production schedules, these machines provide the high output rates needed to meet modern competitive conditions.

In the Union Special line, it's easy to find the right unit to meet your particular requirements. ASK FOR RECOMMENDATIONS.

SEND FOR THIS BULLETIN!

Get your copy of this 16 page illustrated bulletin containing helpful data and charts on the complete Union Special line of bag closing machines. UNION SPECIAL MACHINE CO., 416 North Franklin Street, Chicago 10, Illinois

UNION SPECIAL

For more details circle NED-529 on enclosed inquiry slip

Now Available For WATER FILTERING

The Great MARVEL SYNCLINAL FILTERS

- EASY TO CLEAN
- OPERATE LONGER BETWEEN CLEANINGS
- EFFICIENT
- NO MOVING PARTS TO WEAR or GET OUT OF ORDER

SUMP TYPE (Cutaway)

Capacities of (Line Type) 5 to 50 g.p.m. (Sump Type) 5 to 100 g. p. m. Monel mesh sizes 30 to 200.

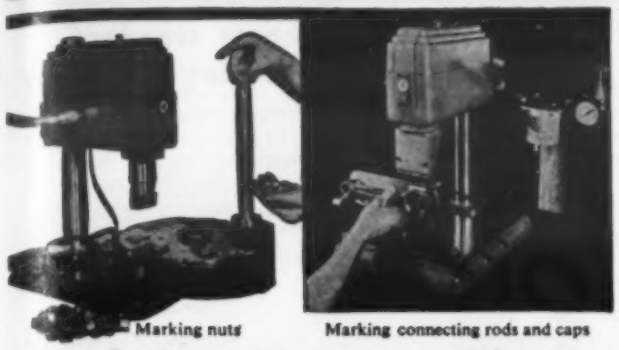
LINE TYPE (Cutaway)

Outstanding qualities made Marvel Synclinal Filters the choice for hydraulic oil systems. The same qualities are now available for water filtering, in both sump and line types. Line models operate in any position and may be serviced without disturbing pipe connections.

Write For WATER FILTER Data

MARVEL ENGINEERING COMPANY
627 W. Jackson Blvd. Chicago 6, Ill.

For more details circle NED-530 on enclosed inquiry slip



Marking nuts — Marking connecting rods and caps

Mark More Parts per Minute

Whether your problem is the marking of nuts, bolts, connecting rods, axles, pots and pans or the branding of screw drivers, pencils, baseballs or ammunition belts—it will pay you to investigate the Automark. This automatic high-speed pneumatic marking machine needs no special jigs or fixtures for average work. Where holding devices are required several standard automatic fixtures are available. We'll gladly design and build special equipment. Write for Bulletin 712.

NEW Electric Typewriter marks metal name plates in one-fifth the time.

AUTOMARK
Automatic Marking MACHINE
Manufactured Exclusively By

AGENTS
Desirable territories open for responsible representatives. Write giving complete information, lines carried and territory covered.

DEFIANCE MACHINE & TOOL COMPANY
1928 South Vandeventer Ave. • St. Louis 10, Mo.

▲ For more details circle NED-531 on enclosed inquiry slip ▲

Pangborn "EZ" Hydro-Finish paid for itself in three months at Benedict-Miller, Newark, New Jersey.

Checking with micrometer proves Hydro-Finish can hold tolerances as close as .0001".

"EZ" DOES IT!*

***At Benedict-Miller, PANGBORN "EZ" Hydro-Finish® Cabinet**

- **Saves Labor!**
- **Gives Better Surfaces!**
- **Increases Business!**
- **Saves Money!**

"EZ does it," says Robert M. Bloss, General Manager at Benedict-Miller of Newark, N. J. "In fact, our EZ Hydro-Finish does a lot more than we ever figured it could!"

Take one case in particular—cleaning the inside surfaces of doll head molds. From a required hand cleaning time of three hours per mold, Hydro-Finish stepped up production to 80 in five hours—a labor saving of well over $200 on this job alone!

Heat treat scale was previously removed by pickling. But after trying Hydro-Finish, the report was: "Besides all the extra costs and trouble, an acid pickling surface just can't compare with a Hydro-Finish surface." On some items, Benedict-Miller's heat treat business was actually *doubled*, as customers learned about the amazing finish B-M (and EZ) turned out!

It all adds up to better quality, faster production, and increased profits for Benedict-Miller and its customers. Learn how Pangborn can do this for you, too. Write today for Bulletin 1400-A. Address: PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Maryland.

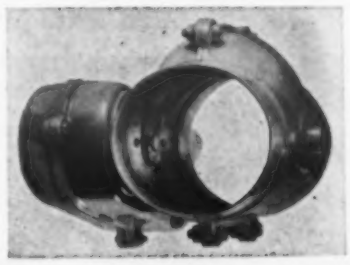
Pangborn

Look to Pangborn for the latest developments in Blast Cleaning and Dust Control equipment

BLAST CLEANS CHEAPER with the right equipment for every job

▲ For more details circle NED-532 on enclosed inquiry slip ▲

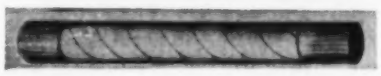
AIR CONTROL VALVE
for suction systems, dust collectors



An automatic air control valve is available for use with metal grinding and polishing machines, wood jointers, planers, sanders, table saws and other equipment incorporating air suction systems and dust collectors. The solenoid-controlled Ventomatic valve can be fitted to any machine, pipe or installation within its scope. It opens and closes automatically as the machine switch is turned on and off, thus preventing the continual exhausting of warm air from the room when the machine is not operating. When valve is open, there is no obstruction in the air passage. Valves are available to fit 3, 4, 5, 6, 7 and 8-in. ducts. Made by **Kindt-Collins Co.**, 12653 Elmwood Ave., Cleveland 11, O.

▲ For more details circle NED-533 on enclosed inquiry slip ▲

BURNISHING BRUSH
glass fibers give polishing action



Consisting of thousands of glass fibers bonded together, FybRglass burnishing brushes are offered in ½, ⅝ and 1-in. diameters and 6-in. lengths as standard. Other diameters and lengths can be made to order. As the brush wears down, tape holder is unwound to expose new burnishing surface. Made by **Eraser Co.**, 108 S. State St., Syracuse 2, N. Y.

▲ For more details circle NED-534 on enclosed inquiry slip ▲

BULK MATERIAL BINS
have trap-door bottoms

Sand, metal stampings, steel scrap and waste material can be handled in all-steel Master Bins with trap-door bottoms. Designed to tier one on another, bins can be handled by fork trucks. At any desired height, a hook on top of the mast is engaged. Then, as forks are lowered over a chosen dumping stop, the bottom of the box opens while the hook holds the box in position. Bins are made to specification. Made by **Lewis-Shepard Products**, Dept. R-1, Watertown 72, Mass.

▲ For more details circle NED-535 on enclosed inquiry slip ▲

INEXPENSIVE LINE and SLIDE SWITCHES
Over 20 Types

Handy, dependable switches add a lot to any electrical product—and Stackpole has the right, low cost type for 9 out of 10 requirements. Types include 1-, 2-, 3- and 4-pole and 3-position switches, with or without detent, spring return or other optional features—also switches for use at 3 amps. at 125 V. AC (or 1 amp. 125 V. DC) and many special types for quantity users. Write for Bulletin RC7C.

STACKPOLE
Electronic Components Division
STACKPOLE CARBON CO., St. Marys, Pa.
Fixed & Variable Resistors—Iron & Ceramag® Cores—Molded Coil Forms—Molded "Gimmick" Capacitors, etc.

▲ For more details circle NED-536 on enclosed inquiry slip ▲

RUGGED Century MOTORS help KEEP PRODUCTION ROLLING

Arrow shows 75 horsepower Century Slip Ring motor installed on a large bending roll.

Century Motors are designed for stamina, engineered for long, dependable service, carefully tested and balanced for precision performance.

What's more, you can select a size and type of Century Motor that's exactly right for your particular job. They're built in sizes from ⅛ to 400 h.p.—to meet all kinds of atmospheric or plant operating conditions.

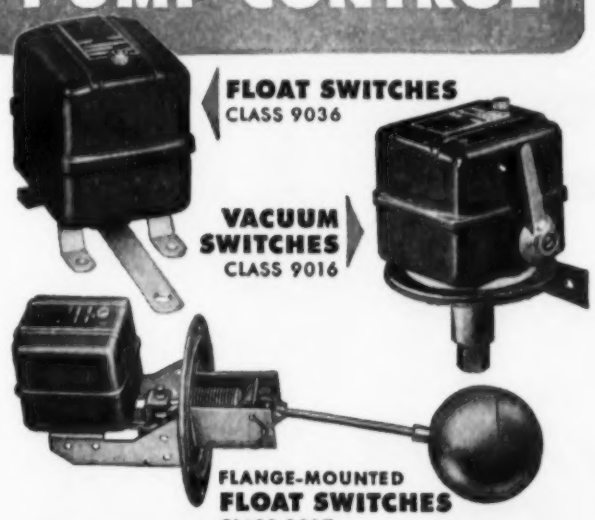
Why settle for less than a Century, when you specify your next electric motor?

Century C MOTORS

CENTURY ELECTRIC COMPANY
1806 PINE STREET • ST. LOUIS 3, MO.
CE-754R Offices and Stock Points in Principal Cities

▲ For more details circle NED-537 on enclosed inquiry slip ▲

a Complete Line of
H.P. RATED VACUUM HEATING PUMP CONTROL



Write for Bulletin 550, Square D Company, 4041 North Richards Street, Milwaukee 12, Wisconsin

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

▲ For more details circle NED-538 on enclosed inquiry slip ▲

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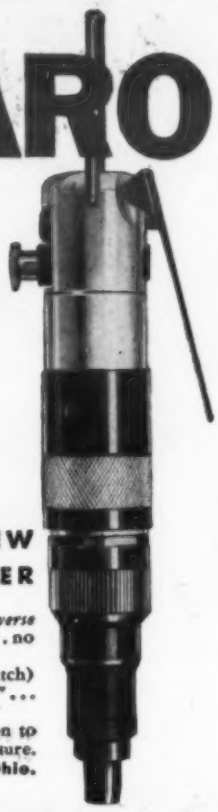
Another

FIRST by ARO



Instant PUSH-BUTTON *Reverse*

A REVOLUTIONARY SCREW DRIVER AND NUT SETTER

ARO's new push-button valve means *instant reverse action*... no need to remove from work... no stopping to turn levers... no wasted time.

Adjustable clutch (available with positive clutch) Length 7-11/16"... outside diameter 1-5/16"... weight 1.4 lb.

This outstanding tool must be seen in action to appreciate its amazing action. Write for literature. **The Aro Equipment Corporation, Bryan, Ohio.**
Aro Equipment of Canada, Ltd., Toronto

ARO **AIR TOOLS** Also... LUBRICATING EQUIPMENT... HYDRAULIC EQUIPMENT... AIRCRAFT PRODUCTS... GREASE FITTINGS

▲ For more details circle **NED-540** on enclosed inquiry slip ▲

an unbeatable combination

WALES HOLE PUNCHING AND NOTCHING UNITS *and* WALES TWIN COLUMN PRESSES

● A typical example of the unique design built into Wales Twin Column Presses is the double crank pull down drive on the pair of ram guides. This feature provides equal pressure on both ends of ram and assures parallel alignment of ram to press bed.

Also this alignment feature works hand-in-hand with the exclusive, independent, self-contained Wales Hole Punching and Notching Units with built-in punches and dies which are held in perfect alignment by holders. In addition, Wales Units do *not* require die sets as nothing is attached to press ram.

Have the complete story *of this unbeatable combination* at your fingertips by writing for fully-illustrated, functionally-colored catalogs TODAY.

WALES-STRIPPIT CORPORATION
GEORGE F. WALES, *Chairman*
363 PAYNE AVE., NORTH TONAWANDA, N. Y.
(*Between Buffalo and Niagara Falls*)
WALES-STRIPPIT OF CANADA LTD., HAMILTON, ONTARIO
Specialists in Punching and Notching Equipment

▲ For more details circle **NED-541** on enclosed inquiry slip ▲

ABRASIVE CUTTING PROCESS uses gas-propelled particles to cut hard and brittle materials

A high velocity stream of gas-propelled abrasive particles is the cutting medium of the Airbrasive cutting process. Applications include controlled removal of metallized films from glass and ceramics, drilling thin sections of hard-to-work materials, accurate cutting of hard or brittle materials, etching, light deburring and polishing.

The Airbrasive unit directs the abrasive stream against the work surface through a sintered tungsten carbide nozzle. It leaves the 0.018-in. diameter nozzle at about 1100 fps. Cutting action is accomplished without the usual increase in temperature and virtually without pressure and vibration. Process has practically no effect on resilient or soft materials and will not damage skin tissue.

Normally, specially processed aluminum oxide powder is used as the abrasive, but applications requiring a lighter abrasive can use a classified dolomite. Standard commercial grades of abrasive are not suitable. Any dry inert gas such as carbon dioxide can be used as the propellant. Unit operates on 110-v, 60-cycle ac. Two right angle and one straight nozzle is supplied. Made by **S. S. White Dental Mfg. Co.,** Industrial Div., Dept. 30, 10 E. 40th St., New York 16, N. Y.

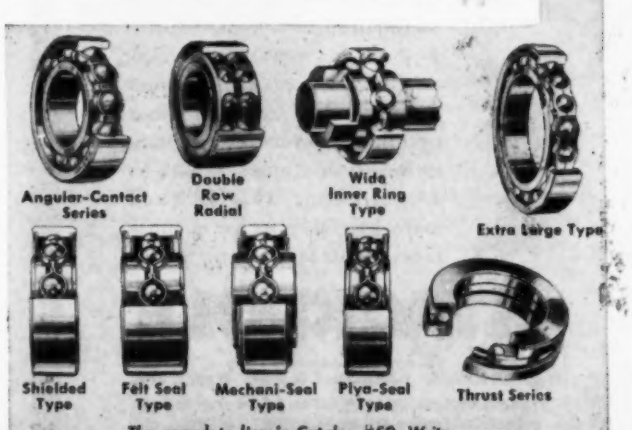
▲ For more details circle **NED-542** on enclosed inquiry slip ▲

DRILL PRESS drills to center of 18¼-in. circle

Features of Clausing 18-in. heavy duty general purpose drill press include: drive spindle supported by two sealed-for-life ball bearings; precision ground spindle floated free from quill by sealed ball bearing at top and double-row bearing at bottom; vernier depth stop with control accurate to 0.001-in.; 6½-in. spindle travel; and positioning mechanism which moves head and table. Machine drills to center of an 18¼-in. circle. It can drill ¾-in. into steel, 1 in. into cast iron and has a 63/64-in. spindle with No. 3 Morse taper. Maximum distance from spindle to table is 39 in. Production or tilting table is optional. Made by **Atlas Press Co.,** Clausing Div., 2323 N. Pitcher St., Kalamazoo, Mich.

▲ For more details circle **NED-543** on enclosed inquiry slip ▲

FAFNIR BALL BEARINGS
THE MOST COMPLETE LINE IN AMERICA



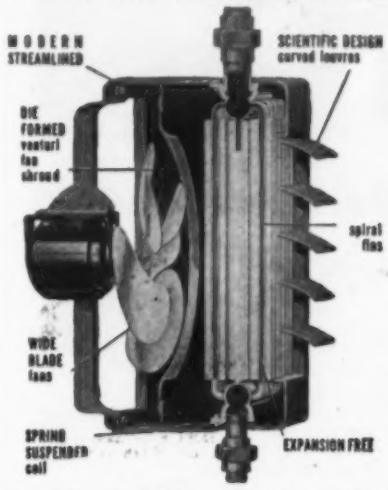
The complete line in Catalog #50. Write . . .

THE FAFNIR BEARING COMPANY
New Britain, Connecticut

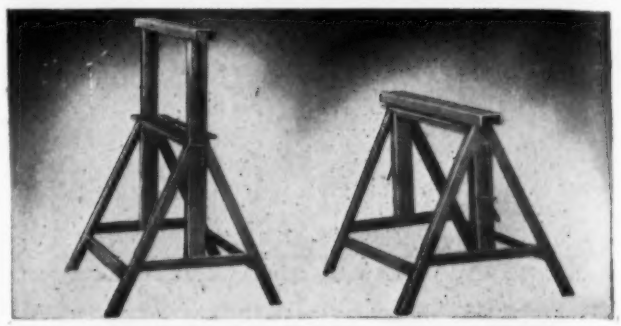
▲ For more details circle **NED-544** on enclosed inquiry slip ▲

UNIT HEATER . . sets new standard of quietness and heating efficiency

McCord Unit Heaters are a time proven product embodying design based on years of experience in the heat transfer field. These units are not only rugged in design and guaranteed for use on #150 p.s.i. steam pressure but are made attractive in appearance. Two outstanding features appeal to maintenance engineers—we use standard motors with standard bases which quickly permits the use of replacement motors should a motor fail in service—the heating element is made of individual spiral fin tubes which are free to expand independently without putting a strain on the brazed joints. The entire heating unit is spring suspended and floats free in the casing, eliminating rigid connections. Improved type fan blades deliver large volumes of air with minimum air noise and vibration which makes these units suitable for office and store use. A complete line of vertical projection type unit heaters and blast coils are also available. Catalog on request or write for folder. "Instructions for Maintenance of Unit Heaters." **McCord Corporation,** Detroit, Mich. *Advt.*



▲ For more details circle **NED-545** on enclosed inquiry slip ▲



EVERY PLANT CAN USE ADJUSTABLE STEEL HORSES

They are the "work horses" in every plant or shop . . . more than pay for themselves, and are never idle because of the many uses their ready adjustability will easily serve:

SPOT WELDING TABLES	SCAFFOLDING
FABRICATION SUPPORTS	CONVEYOR SUPPORTS
LAYOUT WORK	MAINTENANCE WORK
BENCHES	And many other uses

MODELS FOR HEAVY OR LIGHT WORK

Standard length 36". Low Height 24"; Extended Height 42". Adjustable at 1½" intervals. Held in position by steel lock pins. All units portable. Painted one coat chrome yellow.

Send today for BULLETIN No. 500 covering BRUSCO Boxes and Hoppers.

Brusco HANDLING EQUIPMENT

BRUMMELER STEEL PRODUCTS CORPORATION
1411 Ionia Ave., S. W. Grand Rapids, Michigan

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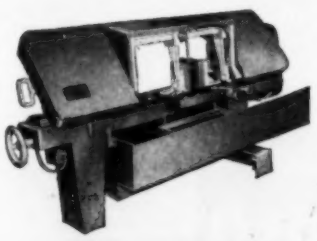
You can CHANGE BLADES FASTER

Kalamazoo

METAL CUTTING BAND SAWS

No stooping, no fumbling... just swing saw cover open and everything is at your fingertip. Release blade tension, remove blade, insert new one and tighten. It's as simple as that! Result? Minimum loss of time, less chance of damage to blade and of injury to operator.



This is but one of many exclusive Kalamazoo features that add up to lowest cost intermittent or continuous cutting. It will pay you to specify Kalamazoo Metal Cutting Band Saws . . . three sizes, available with coolant system and casters.

MACHINE TOOL DIVISION
Kalamazoo TANK and SILO CO.
912 HARRISON ST., KALAMAZOO, MICHIGAN

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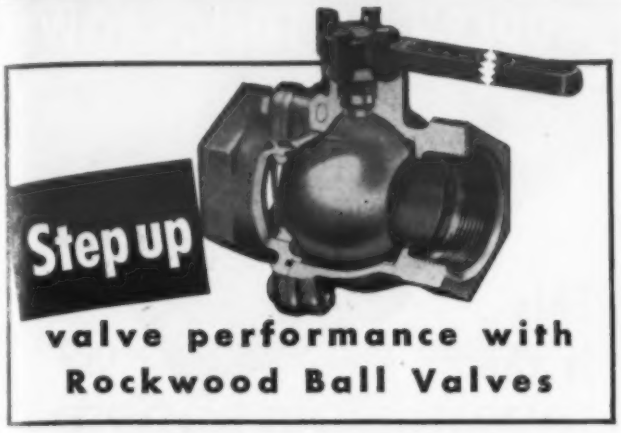


Get full *round* flow in a quarter turn!

With Rockwood Ball Valves, the flow is as round as the pipe itself. No turbulence. Minimum friction loss. *And they stay leakproof.*

You'll also like their extra durability. Chrome-plated, floating bronze ball resists scratching, pitting, and abrasion.

Use these valves for handling water, air, carbon dioxide, nitrogen and other gases, paraffin and asphalt base petroleums, alcohol, paper fluids, and many other types of fluids and gases. Tested by Underwriters' Laboratories, Inc. For complete details send for free Bulletin V-4. Rockwood Sprinkler Company, 44 Harlow Street, Worcester 5, Mass. Distributors in all principal cities.

ROCKWOOD BALL VALVES

THE FLOW IS AS ROUND AS THE PIPE ITSELF

▲ For more details circle **NED-548** on enclosed inquiry slip ▲

FOR MATERIAL HANDLING—
more and more—the swing is to wide-base pneumatic tires

GENERAL

INDUSTRIAL PNEUMATIC TIRES

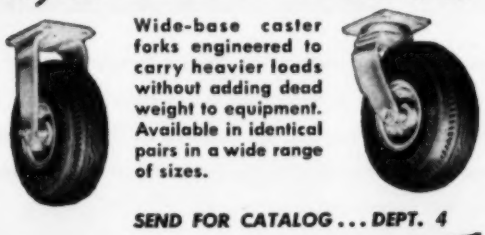
More Designers are specifying wide-base General Pneumatics.
They know Generals add these extra selling points to handling equipment.

SAVE TIME · MONEY · LABOR

- *MORE LOAD CAPACITY AT LOW OR HIGH SPEEDS*
- *CUSHION EQUIPMENT AND LOADS REDUCING BREAKAGE AND SPILLAGE*
- *SAVE HIGH COST FLOORS AND FLOOR SURFACES*
- *SLOW, EVEN WEAR FOR LONG SERVICE*
- *HIGH FLOTATION FOR EASIER ROLLING OVER SOFT GROUND*
- *ROLLS EASIER, SMOOTHER OVER ALL SURFACES*

Available separately or in assemblies of Tires, Tubes and Wheels. Size O.D. 8" to 27"—200 to 4000 lbs. cap. for low or high speeds.

Rigid **CASTER FORKS** *Swivel*



Wide-base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

SEND FOR CATALOG . . . DEPT. 4

THE GENERAL TIRE & RUBBER CO. AKRON, O.

▲ For more details circle **NED-549** on enclosed inquiry slip ▲

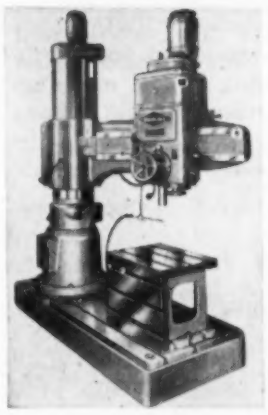
ULTRASONIC THICKNESS TEST AID
magnetic fixture holds searching unit against plate being tested

Nondestructive thickness measurements by ultrasonic Audigage thickness tester are speeded up, even under awkward conditions, by use of magnetic fixture which holds searching unit against plate being tested. Accessory assures good contact, prevents accidental shifting of searching unit and allows one man to operate instrument in different locations, when working on ladders or staging or where test points are beyond easy reach as on tank bottoms and sides.

Standard fixture which is 5 in. wide and weighs 6 oz consists of flat spring with Alnico permanent magnet coupled flexibly to each end. Magnets are strong enough to hold unit against irregular surfaces or those covered by thin coat of paint. Heavier magnets can be provided. Made by **Branson Instruments, Inc.,** Dept. A, 430 Fairfield Ave., Stamford, Conn.

▲ For more details circle **NED-550** on enclosed inquiry slip ▲

RADIAL DRILL
made in 3 to 8 ft sizes for heavy duty drilling operations



Heavy duty radial drilling machine, made in sizes from 3 through 8 ft, has column and sleeve of ample dimensions to withstand stresses, even in unfavorable positions. The arm moves on the sleeve on three guiding surfaces, the length of the bearing insuring the absence of tilt distortion in horizontal and vertical planes. Disk clutch, in top part of the saddle, permits smooth starting of drilling spindle. When disengaging the clutch, an automatic brake stops the gear.

Dimensions of 4-ft model are: center of spindle to column, 49¼ in. maximum; horizontal spindle traverse, 36⅜ in.; maximum spindle radius, 18¾ in.; vertical traverse of spindle and arm, 12⅝ and 28⅜ in.; table working surface, 19¾ x 23⅝ in. Electric coolant pump and universal drilling table, with or without rotary plate, are optional. Made by **Diamond Machine Tool Co.,** 3425 E. Olympic Blvd., Los Angeles 23, Calif.

▲ For more details circle **NED-551** on enclosed inquiry slip ▲

FAST, ACCURATE FLANGING

PHOTO—COURTESY OF CANADIAN PACIFIC RAILWAY.

Flue panels for refrigerator cars are shaped in two operations at a high production rate to close tolerances with a 375 ton Steelweld Press in a large railroad car plant. You, too, will find the many features of Steelwelds of great advantage. All size machines for plate to 1¼ inch and for lengths to 20 ft.

Send for free copy of catalog No. 2010.

THE CLEVELAND CRANE & ENGINEERING CO.
6646 East 281st St., Wickliffe, O.

STEELWELD PRESSES

▲ For more details circle **NED-552** on enclosed inquiry slip ▲

▲ For more details circle **NED-553** on enclosed inquiry slip ▲

Grease Monkeys have retired
—since Transall took over

Pre-Lubricated
Belt Conveyor Idlers

No Lubrication Labor
No Lubricant Cost

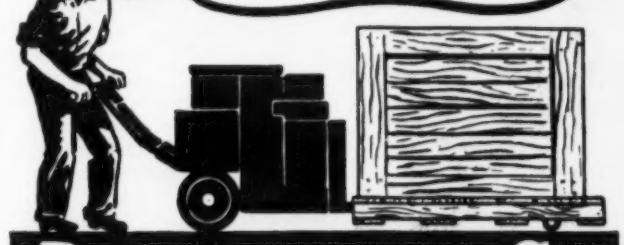
TRANSALL INC.

Manufacturers of a complete line of Belt Conveyor Equipment

119 North 11th St. Birmingham 4, Ala.

▲ For more details circle **NED-554** on enclosed inquiry slip ▲

FREE! Revolvator's new Truck Index helps you pick size, capacity and type to suit your needs. Send coupon today.



REVOLVATOR CO.

REVOLVATOR CO.
8832 Tonnele Ave., North Bergen, N. J.
Gentlemen:
We want to know, without obligation, all about Revolvator Go-Getter Pallet Type Liftrucks.
Name.....
Position.....
Company.....
Address.....

▲ For more details circle **NED-555** on enclosed inquiry slip ▲

eliminate your tapping problems..

with "Auto-tap" the new lead screw tapping attachment

your inspection department records will show that parts tapped with "Auto-tap" are consistently free from rejects . . . drives the tap and takes the load . . . your taps last much longer

WRITE FOR FULLY DESCRIPTIVE LITERATURE AND PRICES

Automatic Methods INC.
"PRECISION PARTS FOR THE AIRCRAFT INDUSTRY"
42 Walnut St., Bldg. 203, Newark 2, N. J.

For more details circle NED-556 on enclosed inquiry slip

IN MANY PRODUCTION PLANTS!

Continuous inspection unites with blind, straight-through and templet grinding by projection during the grinding period. This complete speedy machine handles a wider range of work than ever before. Difficult jobs in steel and tungsten carbide which required several machines are dispatched with ease and profit on Visual-Grind. Tolerances and accuracy are progressively controlled by visual reference. A precision optic system gives trueness and definition. Husky construction insures rigidity and long life.

Ask for Bulletin N-9.

VISUAL GRIND THE CLEVELAND GRINDING MACHINE CO.
1643 EDDY ROAD • CLEVELAND 12, OHIO

For more details circle NED-557 on enclosed inquiry slip

NEW SKINNER SOLENOID VALVE

EXPLOSION PROOF TYPE X5

THE new Skinner X5 Solenoid Valve is basically the same as the widely accepted and tested V5, but modified to a construction that is Underwriters' approved for Class I, Group D hazardous locations. Small size and lightweight features are retained, and the X5 is low in price because of the many parts which are interchangeable with other Skinner valves. Rating is 10 watts max.; soft, spring loaded seals prevent leakage; internal parts are stainless steel; wide variety of port locations in 1/8" and 1/4" size; most types available for metering; for AC or DC in a wide range of voltages and frequencies; can be mounted in any position; supplied as two-way normally open or closed, three-way normally open, closed or directional flow. *Write today for details!*

SKINNER ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
135 Belden Ave., Norwalk, Conn.

For more details circle NED-558 on enclosed inquiry slip

PORTABLE HAND GRINDERS used with mounted wheels and points

Tool and die departments, pattern shops and designers are potential users of three hand grinders for use with mounted wheels and points. Model 137 has a 5/32-in. capacity geared chuck and a speed of 20,000 rpm. Model 146 has a speed of 20,000 rpm and is offered with 1/8 and 1/4-in. chucks. Model 148 runs at 36,000 rpm and comes with 1/8 and 1/4-in. chucks. Models 137 and 147 use shank accessories of 1 3/4 in. and smaller diameters, while third model has a capacity of 1 in. and smaller diameters. All are less than 10 in. long and weigh about 2 lb. Included with each is steel carrying case with rack for wheels and points, dressing stone and chuck wrenches. Made by **Skilsaw, Inc.**, 5027 Elston Ave., Chicago 30, Ill.

For more details circle NED-559 on enclosed inquiry slip

CIRCULAR SAW BLADE general purpose, with carbide tips

Designed for use in power bench or power hand saws, this general purpose circular saw blade has tungsten carbide tips brazed on each tooth. It will cut clean edges in steel, aluminum, corrugated and asbestos sidings, plus cutting such materials as Masonite, Bakelite, pressed and hard wood, slate and rock lath. Provison for resharpening is made by the manufacturer, **Gay-Lee Co.**, 73 W. Fourteen Mile Rd., Clawson, Mich.

For more details circle NED-560 on enclosed inquiry slip

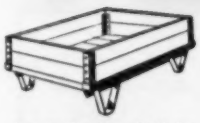
SCOOP ATTACHMENT for bulk handling by fork truck

Various dry bulk materials can be handled by this hydraulically powered scoop for use with Elwell-Parker fork trucks. Dimensions and capacities vary with type of material to be handled and size of truck with which scoop is used. Model designed for use on 4000-lb capacity truck has maximum capacity of 25 cu ft or 3200 lb. Models for 2000 and 6000-lb capacity trucks are also available. Scoop is controlled by a valve on the truck's cowl. Made by **Elwell-Parker Electric Co.**, 4502 St. Clair Ave., Cleveland 3, O.

For more details circle NED-561 on enclosed inquiry slip

5 capacities. Husky, rigid, long lasting

BARRETT STEELEG SKIDS
Platform • Box • Stake Types
BUILT TO LAST



Barrett Box-Top Skid for bulk loading. Can be nested. Various heights. Special types available.

Barrett Stake Skid for pipe, lumber, steel bar stock. Stakes removable.

Barrett Skids are built to take heavy, slam-bang abuse year after year. High carbon manganese steel angles (50% stronger than mild steel) prevent deflection . . . no sagging skids to hamper lift-truck operations. Iron-bound hardwood top boards. All parts easily replaceable. Forged steel legs. Broad bearing surface protects floors. Any size, any capacity for hand or electric lift-truck operation. *For complete details get Bulletin 4882.*

BARRETT-CRAVENS COMPANY
4623 S. Western Blvd., Chicago 9, Ill.
Representatives in All Principal Cities.
Canadian Licensee: S. A. Armstrong, Ltd., Toronto, Can.

BARRETT
One man does more than 3 or 4...with a Barrett

For more details circle NED-562 on enclosed inquiry slip

MODERN AS TOMORROW!

This is the EXECUTIVE by LINEMASTER®
America's Foot Switch Leader

PRICE ONLY $6.50 list less discount
Size 4" x 4 5/8" x 1 1/4". Weight 14 ounces

The Executive incorporates two switches in one, with selective circuits and guaranteed mechanical interlock. Its sleek, low-to-the-floor design enables easy and comfortable on-center pivot action; only one circuit can be operated at one time — preventing accidental tripping of two circuits.

It's the Electrician's dream — only one screw to remove and the switch is ready for wiring.

Engineers will want to incorporate the Executive by Linemaster into their plans when designing their modern machines.

Rating (each interior): Single Pole — Double Throw. 30A @ 125V — 15A @ 250V

LINEMASTER SWITCH CORP.
DEPT. C, P.O. BOX 312 PUTNAM, CONN.

For more details circle NED-563 on enclosed inquiry slip

Yes, We Can Do It!

We Can Quote on Your Application, Accept Your Order and DELIVER

We are in an enviable position whereby we can deliver the answer to your assembly problem in the form of a particular piece of equipment designed especially for your needs . . . We can do it NOW —not maybe—some time in the future. Though generally speaking, deliveries throughout industry are uncertain, and this situation probably may continue for some time, our position is different . . . We have marshalled our resources and facilities in a way whereby we can positively assure the execution and delivery of your orders without delay.

DETROIT POWER SCREWDRIVERS, HOPPER FEEDING UNITS
NUT DRIVERS, SPECIAL ASSEMBLING MACHINES

Thousands of manufacturers have profited through greatly stepped-up production as a result of our service. You, too, can benefit by the use of D. P. S. power-driven machines. Get further details. Also send sample assembly for production estimate.

DETROIT POWER SCREWDRIVER CO.
2819 W. FORT ST. DETROIT 16, MICH.

For more details circle NED-564 on enclosed inquiry slip

Your Best Buy in Compact Power!

Ready for either use *without alterations!*

Denison's new vane-type Pump/Motor combines *radial hydraulic balance* with fully interchangeable pump and fluid motor utility — the finest money can buy in compact power for 2000 psi continuous duty.

Available in four sizes with a choice of cam rings for each size, the new Denison HydrOILic Pump/Motor offers eleven pumping capacities from 2.7 to 70 gpm. As fluid motors, their torque capacities range from 13 to 257 pound-inches per 100 psi.

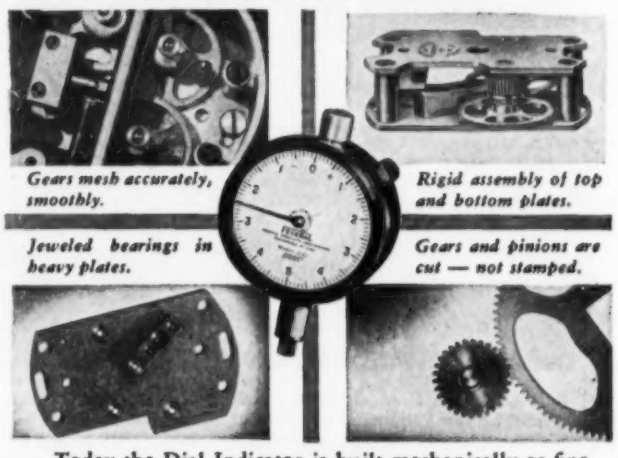
Balanced Vane Action assures minimum wear. Vanes contact the cam ring with *dual* sealing edges. **Full radial balance** reduces surge and pulsation to a minimum. **Interchangeable cam rings** widen the range of capacities for each Pump/Motor size. And all Pump/Motors are instantly adaptable for **either clockwise or counter-clockwise** operation. Write for Bulletin P-5.

DENISON HydrOILics PUMP/MOTOR

The DENISON Engineering Co.
1511 Dublin Rd., Columbus, Ohio

▲ For more details circle **NED-565** on enclosed inquiry slip ▲

The Dial Indicator Built as Fine as the Finest Watch



Today the Dial Indicator is built mechanically as fine as the finest watch, for years the standard of comparison for fine manufactured articles. Federal leads in the development of Low-Friction, Low-Inertia, Full-Jeweled Indicators. Federal's top and bottom movement plate construction has long defied improvement. Indicator maintenance men prefer it to all others.

Send for Federal's latest catalog showing the most complete line of Dial Indicators and Indicating Gages. FEDERAL PRODUCTS CORP., 1179 Eddy Street, Providence 1, R. I.

FEDERAL

Largest manufacturer of indicating type gages . . . exclusively.

▲ For more details circle **NED-566** on enclosed inquiry slip ▲

Get "Spot Sources" of Hot Water this way

Save Money and Space

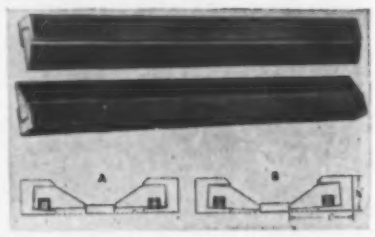
Here's an economical way to get an extra supply of hot water for washrooms, laundry, dishwashing or any service that overburdens your present supply. Install a GENERAL Instantaneous Water Heater. This compact heater can be readily tapped into pipe lines at any strategic spot throughout your building. No tank! No excavating! No complicated piping! The GENERAL Instantaneous Water Heater avoids long runs and heat waste. It is heated with live steam—up to 125 lbs. through the shell . . . or with exhaust steam or boiler water. Largest of 12 sizes only 15" by 120". Capacities: 6 to 300 gallons of clear, rust-free hot water per minute through seamless copper tubing. Bronze heads. Write for illustrated Catalog 60. General Fittings Co., Dept. I, 123 Georgia Ave., Providence 5, R. I.

GENERAL

TANKLESS AND INDIRECT WATER HEATERS AND HEATING SPECIALTIES

▲ For more details circle **NED-567** on enclosed inquiry slip ▲

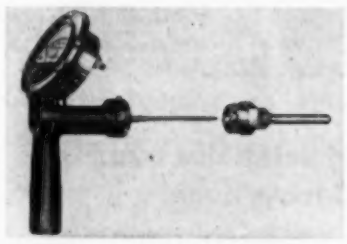
VISE HOLD-DOWN FIXTURE work cannot slip or slide



Forward or sideways movement of work pieces under cutting tool pressures is prevented by Red-E nonslip vise hold-down fixture with jaws made of hardened steel in 4, 8 and 12-in. sizes. Off-angle construction of rear and bottom of jaw recess surfaces forces jaws down as vise pressure is exerted, gripping work securely, as drawing B shows in illustration. In drawing A, jaws have not yet contacted work. Automatic locking action is governed by movement of jaws up and down under spring control. Made by **Ready Tool Co.**, 554-D Iranistan Ave., Bridgeport 5, Conn.

▲ For more details circle **NED-568** on enclosed inquiry slip ▲

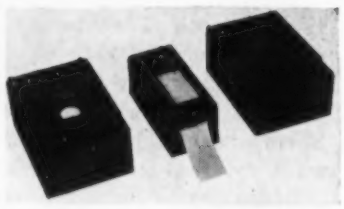
PORTABLE DIESEL PYROMETER checks cylinders and exhaust heats



Designed for test purposes and for installations where no permanently mounted instrument is available, this portable diesel engine pyrometer is designated model 4-321. Thermocouples can be installed in each cylinder and in main exhaust line. Temperatures can be checked at any time by inserting pyrometer prongs into corresponding receptacles in terminal head of thermocouple. Made by **Bristol Co.**, 30 Bristol Rd., Waterbury 20, Conn.

▲ For more details circle **NED-569** on enclosed inquiry slip ▲

WELDING ANALYZER records welding machine variables



Welding current and electrode force of single and three phase resistance welding machines are measured and recorded simultaneously by the direct writing welding analyzer. Squeeze, weld, hold and off time intervals are shown. It also records the small 180-cps component present in three-phase welding machine current when ignitron rectifiers are used. Model BL-213 analyzer consists of modified dual channel oscillograph, modified amplifier and universal amplifier. Operating variables of resistance spot, projection and seam welding machines can be recorded. Made by **Brush Development Co.**, Instrument Div. 36G, 3405 Perkins Ave., Cleveland 14, O.

▲ For more details circle **NED-570** on enclosed inquiry slip ▲

HALLOWELL "700" STEEL PLATFORM TRUCKS —real factors in economical materials handling

All-steel, heavy-duty, maintenance-free construction and new, functional design which permits better load distribution and easier handling make HALLOWELL "700" Trucks real factors in reducing materials handling costs.

Versatility, too, cuts costs. Light and medium-duty units are easily converted to tilt type trucks. New-style corner sockets facilitate use of various accessories, speed changeover for different jobs. Write for bulletin 718-3.

STANDARD PRESSED STEEL CO.
Jenkintown 24, Pennsylvania

HALLOWELL® MATERIALS HANDLING DIVISION

sps

JENKINTOWN, PENNSYLVANIA

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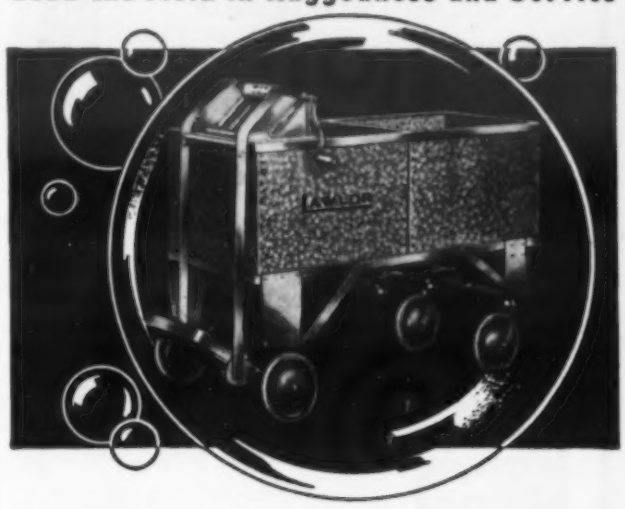
LAWLOR MOPPING TANKS

Lead the Field in Ruggedness and Service



8 styles and sizes of all steel, acetylene welded tanks • 2 or 3 compartments • 30, 60 or 65 gallon capacities • hand or foot pressure wringers • perforated roll wringers • special drain shut-offs • hot dipped, galvanized chassis and frames • rubber tired, cadmium plated steel wheels.

Write for Catalog of Mopping Tanks, Wringers, Floor Scrub Wax-Polishing Machines for every kind and size floor.

S. C. LAWLOR CO.
Quality Floor Equipment for 50 Years
131 N. Aberdeen St., Chicago 7, Ill.

▲ For more details circle **NED-572** on enclosed inquiry slip ▲

Snap-Lock Limit Switches

Over 90% of the nation's leading machine tool builders have standardized on Snap-Lock Limit Switches for use under the extremes of heavy-duty service. Quick, positive action in indexing the work-table—and completely dependable long-term service—are the reasons Snap-Lock Limit Switches were selected for this Hydrohoner application. *Snap-Lock Limit Switches are built in a variety of types and sizes to suit every industrial application; special mountings are available.*

For more information on Snap-Lock Limit Switches, ask for Engineering Bulletin EM-51.

Namco "Stellite"-Welded Solenoids

High-speed action and exact control of critical motions are characteristics that have been performance-proved by hundreds of users of Namco "Stellite"-Welded Solenoids. Typical of this precision service is their application to govern the hydraulic movement of the twin spindle heads of the Hydrohoner illustrated, product of the Micromatic Hone Corporation. *Namco Solenoids are available in push or pull types (up to 25 pounds) for either A-C or D-C service in a variety of standard mountings, to meet almost every industrial application.*

For more information on Namco Solenoids, ask for Engineering Bulletin EM-52.

ELECTRICAL MANUFACTURING DIVISION
182 East 131st Street • Cleveland 8, Ohio

THE NATIONAL ACME CO.
CLEVELAND, OHIO

▲ For more details circle **NED-573** on enclosed inquiry slip ▲

Aerovent FAN

EXTENDED SHAFT FAN

KEEPS MOTOR OUT OF AIR STREAM

Extended shaft may be water jacketed, if desired. Sizes 12" to 84". 2, 4 or 6 Blades.

For industrial applications where it is desired to keep the motor out of the air stream to meet Underwriter's specifications for exhausting explosive vapors. It protects the motor from high temperature air, corrosive fumes, or combination of obnoxious fumes and moisture.

Certified Ratings — PFMA

Other Models

Direct Connected, Man Cooling, Duct Type, Belt Driven, Pulley Driven. Sizes 12" to 144".

Write today for

ENGINEERING BULLETIN

AEROVENT FAN CO., INC.

ASH and BROWN STREETS, PIQUA, OHIO

Competent Sales Engineers in Principal Cities

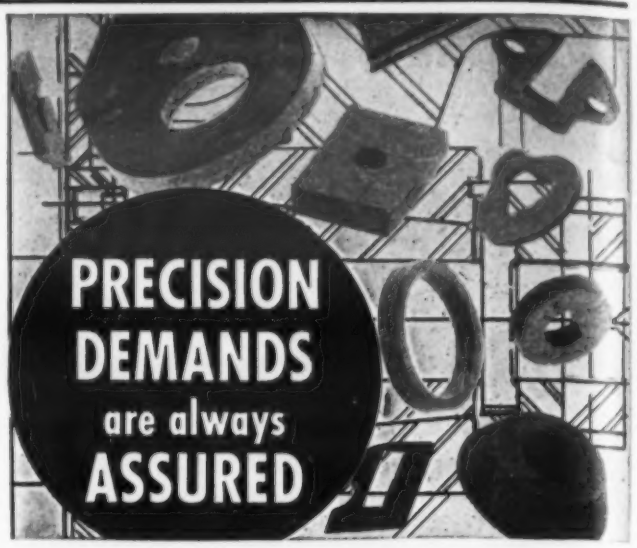
▲ For more details circle NED-574 on enclosed inquiry slip ▲

MORTISING ATTACHMENT

makes square mortises on drill press

Square end mortises are made quickly and accurately with this mortising attachment for all South Bend drill presses and other makes having 1¾-in. quill and using ½-in. chuck. Device consists of fence assembly which bolts to press work table, mortising chisel holder which clamps to press quill and chisels and bits in ¼, ⅜ and ½-in. sizes. Guide arms which are attached to fence adjust separately to handle irregular shaped pieces. Another feature is 1-in. independent adjustment on base of fence which gives attachment up to 5 11/16-in. capacity under the forked hold-down and as much as 4 7/16 in. between guide arms and fence. Made by **South Bend Lathe Works**, 307 E. Madison St., South Bend 22, Ind.

▲ For more details circle NED-576 on enclosed inquiry slip ▲



Technique of Western Felt production and processing has built an enviable reputation for engineering precision. Chemical specifications must be perfectly met—parts from wool softness to rock hardness are cut to close tolerances. As an extremely versatile material Western Felts are resilient, flexible, compressible. They resist oil, water, heat, age—do not ravel, fray or lose shape. New uses found daily. It pays to depend on Western Felt.

Sheet and Roll Felt Manufactured for Special Purposes and To Meet All S.A.E. and Military Specifications.

WESTERN Felt WORKS

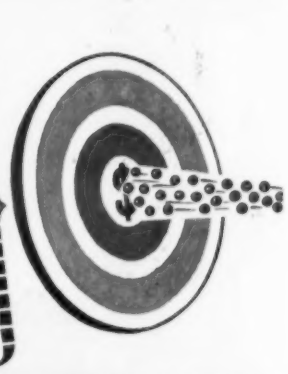
4035-4117 Ogden Ave., Chicago 23, Illinois

Branches in all Principal Cities

MANUFACTURERS AND CUTTERS OF WOOL FELTS

▲ For more details circle NED-579 on enclosed inquiry slip ▲

a **Sure Shot for Savings**



TRUSTEEL SHOT

cuts blast cleaning costs because it never shatters

When abrasive starts to crumble, it loses its cleaning efficiency. Through annealing, drawing and other processes, the life of some iron abrasives has been increased so they can be sold as premium abrasives. However, a true steel shot is the only abrasive that NEVER SHATTERS. *TRUSTEEL* has the toughness that only steel can give. That's why *TRUSTEEL* Shot lasts longer, cleans faster — costs less in the long run. It is made of high carbon steel that has received a *full* heat treatment, not just drawn or annealed.

LIFE COMPARISON

TRUSTEEL VS. CHILLED IRON SHOT

CHILLED IRON after 50 passes

TRUSTEEL after 1500 passes

TRUSTEEL Shot lasts many hours longer instead of breaking into the millions of sharp pieces that abrade the wearable parts of your cleaning machine. As a result, you not only have less abrasive to buy, but you also make large savings in replacement parts and maintenance labor. *Send for a trial order of TRUSTEEL today.*

THIS BULLETIN GIVES YOU THE FACTS — It shows where the average blast cleaning dollar is spent and how savings can be made. Send for your copy today.

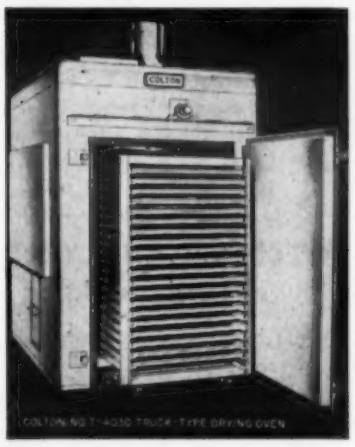
American WHEELABRATOR & EQUIPMENT CORP. — TRUSTEEL SHOT

608 S. Byrkit St., Mishawaka, Indiana

▲ For more details circle NED-575 on enclosed inquiry slip ▲

DRYING OVEN

large capacity unit holds two trucks with 20 trays each



Engineered to accommodate tiers of trays on truck units, model T-4030-E drying oven permits large batches of materials to be processed quickly with a minimum of handling. Walls are insulated with 2 in. of nonsettling 9-lb density rock wool. Door is gasketed single side-swing type with adjustable hinge straps. Spring relief type door catches automatically release when internal pressure reaches a certain point.

Doors can be located in either or both ends. Fresh air is admitted near the floor, filtered, drawn to the heating chamber at the top, then directed downward and horizontally across the trays. Electric ribbon heaters or strip heaters are standard. Indirect gas or steam heating can be supplied. High velocity air circulation produces uniform drying. Oven accommodates two trucks, each with 20 trays. Made by **Arthur Colton Co.**, 3400 E. Lafayette Ave., Detroit 7, Mich.

▲ For more details circle NED-577 on enclosed inquiry slip ▲

SPRAY NOZZLES... two guides to proper selection!

No matter what you may face in the way of a spraying problem, it can be solved quickly and at low cost with Spraying Systems Spray Nozzles. Two fact-packed catalogs—No. 22, General Industrial Spray Nozzles, and No. 23, Pneumatic Atomizing Nozzles—are yours for the asking. They show you all the various types of spray nozzles available . . . explain design and construction . . . and outline spray characteristics such as atomization, impact of spray and capacity. Write for your copies today.

SPRAYING SYSTEMS CO.

ENGINEERS AND MANUFACTURERS

3211 RANDOLPH STREET BELLWOOD, ILLINOIS

WRITE FOR CATALOGS NO. 22 AND NO. 23

▲ For more details circle NED-578 on enclosed inquiry slip ▲

REALOCK FENCE

gives **locked-in** protection

All fittings on Realock Fence have bolts so placed that nuts cannot be removed from the outside. This means that Realock Fence provides *added protection* for your grounds and property . . . effectively discourages tampering by would-be trespassers.

Strongly constructed, Realock Fence has high resistance to the elements because of a special galvanizing process . . . gives permanent protection and trouble-free service year after year. For additional information write our nearest sales office or consult your classified telephone directory.

THE COLORADO FUEL & IRON CORPORATION – Denver, Colorado

THE CALIFORNIA WIRE CLOTH CORPORATION – Oakland, California

WICKWIRE SPENCER STEEL DIVISION – Buffalo, New York

REALOCK FENCE

THE COLORADO FUEL & IRON CORPORATION

BRANCHES IN ALL KEY CITIES

▲ For more details circle NED-580 on enclosed inquiry slip ▲

SPO AIR VIBRATORS

Specify SPO dependable, low-cost air vibrators for all materials handling and foundry applications.

SPO vibrators feature full power starting, hammer-like blows, high-speed operation, long trouble-free service life.

Blow for blow, you can't beat SPO air vibrators! For information on complete line, write today for **Bulletin 50.**

529-SI

SPO INCORPORATED

6475 Grand Division Ave. • Cleveland 25, Ohio

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Users of Acadia Synthetic Rubber component parts in hundreds of industries have found them unsurpassed. No matter what function synthetic rubber must perform, depend on Acadia parts. They best meet exacting specifications and operating conditions such as mositure, oil, heat, wear and age resistance. Molded, extruded, die-cut to close limits —compounded to meet specific conditions. Acadia engineers will gladly cooperate.

- Seals
- Gaskets
- Washers
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- Sheet
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Sheet and Roll Felt Manufactured for Special Purposes and To Meet All S.A.E. and Military Specifications.

ACADIA Synthetic PRODUCTS

Processors of Synthetic Rubber and Plastics • Sheets • Extrusions Molded Parts

DIVISION WESTERN FELT WORKS
4035-4117 OGDEN AVENUE • CHICAGO 23, ILLINOIS

For more details circle **NED-582** on enclosed inquiry slip

Built for LOW MAINTENANCE

GENEROUS CONSTRUCTION with extra metal thicknesses, extra strong parts, extra construction features and extra careful workmanship means lower pumping costs for you. Every pump tested on most modern equipment in industry. Each installation individually engineered.

Horizontally split casing, ball bearings, balanced impeller, wearing rings, hand finished water passages, cast shaft sleeves, generous stuffing box length. Choice of iron, bronze, stainless steel.

Standard sizes from 10 to 7000 gpm with 475 foot head. Larger sizes available. For complete information, call your Allis-Chalmers Office, or write Allis-Chalmers, Milwaukee 1, Wisconsin for bulletin 08B6146.

A-3320

ALLIS-CHALMERS

For more details circle **NED-583** on enclosed inquiry slip

For Dependable, High-Pressure Connections

High-pressure connections are the best electrical connections. They are also the best mechanical connections because tests show that they have better ability to stay tight—are trouble-free once installed.

All connectors in the famous BLACKBURN Hi-Strength Line produce high pressure connections. Also, they are priced right to give you low cost connections that you can depend upon . . . Be sure to specify BLACKBURN!

SEND FOR CATALOG

JASPER BLACKBURN CORPORATION
35 Madison St. • St. Louis 6, Mo. • CEntral 3007

For more details circle **NED-584** on enclosed inquiry slip

FLOW RATE CONTROL unaffected by pressure fluctuations

Available with standard capacities ranging from 0.1 to 100 gpm of water, line of direct-acting flow rate regulators is accurate to within 3 per cent. Larger capacities and greater accuracy can be obtained. Control is for jobs calling for blending and proportioning, solvent extraction, controlling filter effluent, water treatment and deionizing, and diluting heavy bulk chemicals. Calibrated dial is set to the desired flow rate and, despite pressure fluctuations in either inlet or outlet lines, the regulator automatically holds flow to the rate set. Made by **W. A. Kates Co.,** 432 Waukegan Rd., Deerfield, Ill.

For more details circle **NED-585** on enclosed inquiry slip

MOTORIZED TURNTABLE for production work, is supplied with from 6 to 48 positions

Production line glazing, sealing, cracking-off, mounting, spraying, soldering, brazing, assembling, marking, welding and induction heating are among many operations possible with this motorized turntable available in from 6 to 48 positions. Equipment is used where requirements are for turning the work spindle, rotating the spindle and starting and stopping at various positions. Adjustment of index speed from few seconds to several minute intervals is made with combination of timer and adjustable speed pulley. An additional foot switch can control index time for any desired length of operating period. Work spindles are either rotating or stationary.

All driving parts, Geneva index mechanism, speed reducer, ½-hp motor with adjustable speed pulley and solenoid operated clutch are located under table. In front and on side of machine are placed the electrical equipment, motor starter, relay, timer and foot switch. Floor space occupied is 40 x 40 in. and machine height is 42 in. Made by **Eisler Engineering Co.,** 753 S. Thirteenth St., Newark 3, N. J.

For more details circle **NED-586** on enclosed inquiry slip

SAFETY EQUIPMENT FOR ALL INDUSTRIES

IPCO WELDING CURTAINS

A SOUND INVESTMENT FOR PROTECTION OF PERSONNEL

Workers and passers-by are protected from harmful rays given off by welding operations. Also serve as a protective shield against flying chips and scale. Made of special flameproof and waterproof canvas —or asbestos—complete with eyelets for suspending on rod or pipe support.

WRITE FOR BULLETIN NO. 43

IPCO *Safety Equipment for all Industries*

INDUSTRIAL PRODUCTS COMPANY

2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle **NED-587** on enclosed inquiry slip

Test these JOB-FITTED gloves for 40% to 70% cost-saving

If your employees have been wearing ordinary canvas, leather or unlined rubber gloves . . .

to handle sharp, abrasive or slippery materials, with or without oil, grease, chemicals, heat or cold . . .

you can probably reduce costs, and improve safety, work handling and employee attitude, by replacing with modern job-fitted gloves of coated fabric.

Reinforced Neoprene (NEOX) Much tougher and more resistant to chemicals than ordinary neoprene. Many styles.

Natural Rubber Extremely resistant to cutting. Has firm, non-slip grip—wet or dry. Many styles.

Edmont Plastic Retains its flexibility, grips well and will not crack or peel. Many styles.

Edmont JOB-FITTED GLOVES

Make This Free Test: Send brief description of your operation, materials handled and temperature condition. We will send samples of the correct job-fitted glove and method for testing on the job. Address

Edmont Manufacturing Company
1240 Walnut Street, Coshocton, Ohio
World's largest maker of coated industrial gloves

For more details circle **NED-588** on enclosed inquiry slip

IBM reports— 5 drafting-room short cuts now possible with Kodagraph Autopositive Materials

A case history based on the experience of the International Business Machines Corp., Endicott, N. Y.

With Kodagraph Autopositive Paper— the revolutionary material that produces positive photographic intermediates *directly*; that can be *handled* in room light . . . *exposed* in a direct-process or blueprint machine, or vacuum frame . . . *processed* in standard photographic solutions.

1. **Redrafting time saved.** IBM makes Autopositives of standard plug-board panel drawings on which various wiring arrangements must be shown. To these intermediates, draftsmen simply add the wiring detail . . . and print-making masters are ready.

2. **Blueprints can be reproduced.** These prints are used to exchange design information between IBM plants. Whenever extra prints are needed for the shop, Autopositives are made directly and used to produce the required prints.

3. **Opaques no problem.** Autopositives can be made from charts, graphs, pasteups—even two-sided originals.

With Kodagraph Autopositive Film— which is handled, exposed, and processed like Autopositive Paper, but whose base is famous Kodak safety film — highly translucent, tough, matte-surfaced (to take pen or pencil notations).

4. **Old drawings are restored.** Weak lines are intensified, backgrounds are cleaned up, when IBM reproduces certain types of old drawings on Kodagraph Autopositive Film. As a result, sharp, legible shop prints can be produced at top speeds.

5. **Halftones are copied.** Printed illustrations—including halftones and line sketches—are reproduced faithfully on Autopositive Film. And from these intermediates, the desired number of direct-process prints is run—each sharp, crisp, clear.

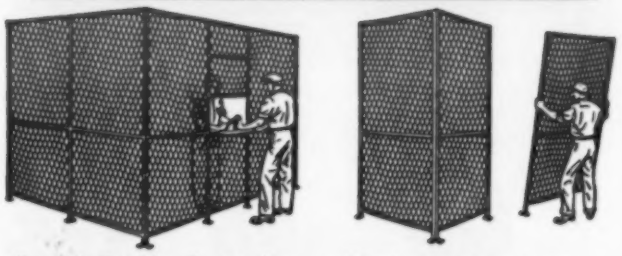
Write today for a free copy of "Modern Drawing and Document Reproduction." It gives full facts on the complete line of Kodagraph Reproduction Materials, which you, or your local blueprinter, can process conveniently, economically.

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak

For more details circle **NED-589** on enclosed inquiry slip

Protect TOOLS AND EQUIPMENT WITH ACORN WIRE MESH PARTITIONS



•Provide Positive Protection

Acorn Wire Mesh Partitions, by enclosing tool cribs and stock rooms, prevent tool and parts pilfering, give tight control of tools, material and personnel in these areas. Divide large open spaces into efficient, separate departments, cut down confusion. Cost much less than solid walls, permit passage of light, air, sound and heat.

•Simple, Quick to Erect

Made in inexpensive standard panels in two designs. Acorn Wire Mesh Partitions are easy to erect, take down, or move anywhere, with no need to move radiators or lights. Can be added to, or reduced in size. Doors can be moved, and corners made quickly to meet changing needs.

ACORN
WIRE and IRON WORKS
5910 S. Lowe Ave., Chicago 21, Ill.

▲ For more details circle NED-590 on enclosed inquiry slip ▲

WE'LL SEND YOU THIS WHOLESALE CATALOG FREE!

Save Money

OVER 9,000 ITEMS INCLUDING

THE HARRY ALTER CO.
1726 S. MICHIGAN AVE., CHICAGO 16
132 LAFAYETTE ST., NEW YORK 13

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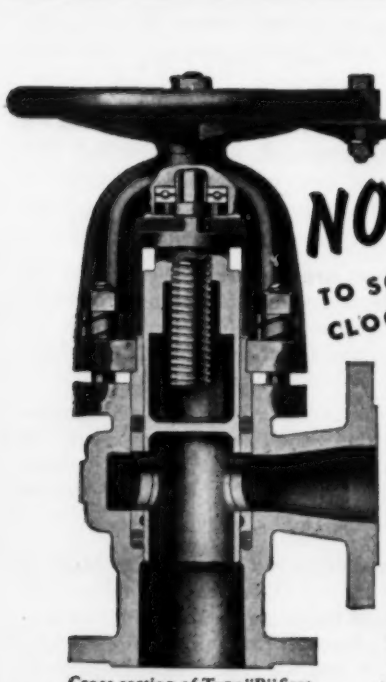


NO SEAT!

TO SCORE...WEAR... CLOG...AND LEAK

The Yarway Seatless Blow-Off Valves eliminate the commonest source of trouble and expense with ordinary blow-off valve operations.

The famous seatless principle first introduced nearly 40 years ago, has been constantly improved and adapted to meet modern service requirements.

There is a Yarway Blow-Off Valve for every pressure.

SEND FOR FREE BLOW-OFF VALVE BOOKLET. PLEASE STATE YOUR BOILER PRESSURES.

Cross section of Type "B" Seatless Angle Valve, Flanged.

YARNALL-WARING COMPANY
131 Mermaid Ave., Phila.18, Pa.

YARWAY BLOW-OFF VALVES

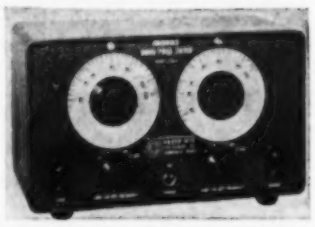
▲ For more details circle NED-592 on enclosed inquiry slip ▲

AIR CYLINDERS
plastic ends lower friction

Available in 2 and 3-inch bores and cushioned or non-cushioned constructions, line of air cylinders operates on pressures up to 300 psi. End pieces are machined from one piece of Micarta which assures close tolerance rod bearing and low friction. Brass pistons, steel parts and O-rings for moving and static seals are used. Cylinders can be adapted for oil or water service, and range of standard mountings is available. Made by **John D. Bachman & Co.,** 1701 Sparger Lane, Bristol, Tenn.

▲ For more details circle NED-593 on enclosed inquiry slip ▲

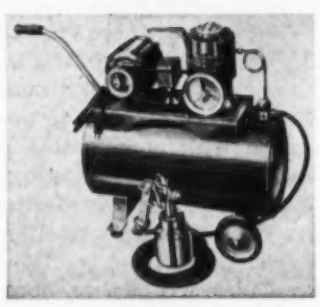
BAND PASS FILTER
for audio and ultrasonic frequencies



Useful in the audio and ultrasonic frequency range for noise measurements, harmonic and frequency analysis or for psycho-acoustic research, model 310-A adjustable band-pass filter has unity pass gain and 24 decibels per octave slopes outside the pass band. A peaking factor is used to reduce attenuation at the cutoff frequencies. Both high and low cutoff frequencies are independently adjustable from 20 cps to 200 kc. This provides maximum flexibility of adjustment of both band center frequency and band width. Made by **Krohn-Hite Instrument Co.,** Dept. NED-1, 580 Massachusetts Ave., Cambridge 39, Mass.

▲ For more details circle NED-594 on enclosed inquiry slip ▲

TANK TYPE SPRAYER
includes motor and compressor



The 10-gallon welded steel air storage tank of this automatic tank sprayer is equipped with an automatic pressure switch which starts the ⅓-hp, 110-v, 60 cycle ac motor when pressure reaches 45 lb. Model 990 compressor is diaphragm type with oil-less ball bearings. Unit is mounted on rubber tired wheels which can be removed for stationary shop use. It is pulled by a removable handle with rubber grip. Included are tire inflator chuck, 15 ft of air hose and No. 121 spray gun for nonbleeder operation. Made by **W. R. Brown Corp.,** 2673 Normandy Ave., Chicago 35, Ill.

▲ For more details circle NED-595 on enclosed inquiry slip ▲

Over 17,000 copies now in use!

THE RELAY DATA YOU NEED...

at your Fingertips!

This famous 640-page Struthers-Dunn RELAY ENGINEERING HANDBOOK answers your questions about relays—explains fundamental types—tells what types to use for specific applications—serves as a comprehensive guide to relay circuits, relay selection, application, use and maintenance. Contains over 1100 illustrations. Limp bound in convenient pocket size. Price $3 per copy.

STRUTHERS-DUNN

5,348 RELAY TYPES
• POWER • SPECIAL-PURPOSE • SMALL •
• SEQUENCE • LATCH • SENSITIVE •
• TIMERS • INSTRUMENT-CONTROLLED •

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BALTIMORE • BOSTON • BUFFALO • CHARLOTTE • CHICAGO • CINCINNATI
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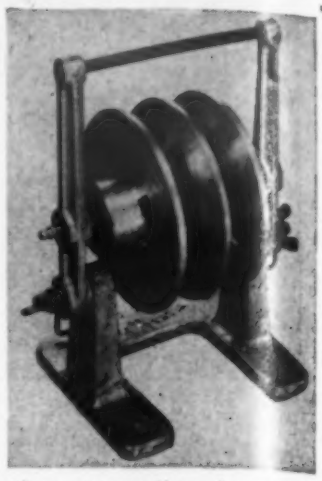
ST. LOUIS • SAN FRANCISCO • SEATTLE • SYRACUSE • TORONTO

▲ For more details circle NED-596 on enclosed inquiry slip ▲

VARIABLE SPEED CONTROL



Variable speed control of V-belt and equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features including; plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameters are increased to transmit greater H. P. over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameters, preventing damage to belts and giving increased torque; single arm support, for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.,** 2224 Albion St., Toledo, O. Advt.

▲ For more details circle NED-597 on enclosed inquiry slip ▲

JIG GRINDING ACCURACY *guaranteed**

INFINITE CONTROLLED SPEEDS
30,000 TO 65,000 R. P. M.

Easily connect jig grinder to jig borer or mill

Then you can finish grind in hardened steel to "tenths" . . . jig grind dowel holes square with a ground base . . . move location of holes in hardened steel blocks . . . jig grind interchangeable holes in hardened sections . . . grind small holes with diamond impregnated mandrels . . . grind contours and relief with tungsten carbide burrs . . . grind radii in die sections . . . eliminate jig bushings in tools where close spacing is essential.

Other infinitely controlled air driven spindle applications

Place spindle on most any machine. Use it for finishing contours on hardened steel working surfaces . . . burring or milling die castings . . . routing wood contours . . . carbide milling or finishing slots . . . finishing holes in hardened steel to "tenths" . . . grinding with diamond wheels, carbide burrs, or diamond impregnated mandrels.

Advantages—10 micro finishes using carbide mills . . . 6 micro finishes using mounted points, operates at any angle . . . air driven, air cooled, overheating prevented . . . speed controlled at optimum point . . . 3 5/16" long motor uses little working space . . . By controlling speed at any point you abolish need for many constant speed spindles.

For immediate quotation please state machine tool application. Get this manual of photos showing operations Vulcanaire performs.

*Dependably accurate to "tenths"

Vulcanaire
BUILT BY TOOLMAKERS FOR TOOLMAKERS

VULCAN TOOL CO., 731 LORAIN ST. DAYTON 10, OHIO

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for LOWER COST Materials Handling

Whether you figure by years of use or by tons handled, BAL tote boxes cost less because they last longer. They're hard

Easy to handle, hard to wear out, and double-strength at ALL reinforcements. Trucks as well as tote boxes made in many sizes for various purposes.

TRUCKS & TOTE BOXES

BAL BUILT WITH A CONSCIENCE

WILLIAM BAL CORPORATION
11 Johnson Street, Newark 5, N.J.

For more details circle NED-599 on enclosed inquiry slip

Sheehan's HEAVY-DUTY TWO-PLANE FORGING CONVEYORS are Better!

SOLVES MANY FORGE CONVEYING PROBLEMS

Write today for literature on sizes, special applications and cost data. You will be surprised at Sheehan's high quality and low prices.

Companion to the nationally-known Sheehan Press Conveyors. This Model B Forging Conveyor is equipped with a special high carbon Steel Woven-Mesh Belt, capable of conveying hot or cold forgings weighing up to 25 pounds with ease. Top of belt can be lowered down within 11 inches of floor to fit under hot or cold trim presses or in front of drop hammers and upsetters . . . saving working space and need for cumbersome chutes. Positive drive spike-studded pulley on head-end assures no belt slippage due to heat expansion while conveying hot forgings. Double strength construction throughout to withstand continuous heavy loads and excessive heat. Open bottom for cooling forgings.

The Two-Plane Model B or the Straight Model S are available in various sizes. Investigate the many construction and safety features that make Sheehan Forge and Press Conveyors outstanding in performance and economy!

SHEEHAN'S FORGING CONVEYORS ARE DIFFERENT . . .

Investigate Today!

Conveyors

R. T. SHEEHAN CO. PLYMOUTH, MICH.

For more details circle NED-600 on enclosed inquiry slip

SPECIAL FINISH OF CARBON STEEL TUBE SOLVES MANUFACTURING PROBLEM

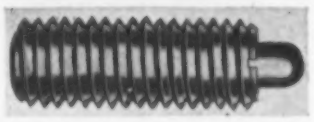
SMOOTH surface, free from pits and scratches, plus rigidity, were prime requirements of a manufacturer of telescopic sights for sporting and target rifles. Like most Superior customers they got exactly what they sought without the need for specifying "premium" tubing. Superior experience backed by highly developed production equipment and extensive research and testing facilities helped solve this production problem.

YOU, TOO, may have a problem involving the use or application of fine small tubing. Superior can help you find the solution. Check your needs against our production of tubing in all analyses from .010" to 3/8" O.D. and in certain analyses (.035" max. wall) up to 1 3/8" O.D. For information write today.

SUPERIOR TUBE COMPANY
2018 Germantown Avenue
Norristown, Pennsylvania

For more details circle NED-601 on enclosed inquiry slip

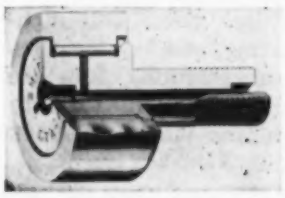
HIGH SPEED SPRING PLUNGER for presses has light spring pressure



Developed for high speed automatic punch presses, series of Silvertip spring plungers features cadmium plated plunger end, light spring pressure and long life with minimum of spring breakage. Case hardened plunger end is rust resistant and telescopes completely into plunger body. Lengths of 1/2 to 2 1/4 in. are available with spring pressures from 1 to 6 lb. Made by **Vlier Mfg. Co.**, 4554 Beverly Blvd., Los Angeles 4, Calif.

For more details circle NED-602 on enclosed inquiry slip

CAM FOLLOWER ROLLERS can be chrome plated to cut wear



Capable of resisting excessive, intermittent radial shock loads, Smith type CTA cam follower rollers can be used in any application where high speeds and heavy load carrying capacity are essential. Units feature a snap ring as a roller retainer which rotates freely when binding occurs. Bearings are made of heat treated alloy steels. Hard chrome plating can be specified to reduce wear under extreme loading. Stud is hardened in the bearing section, but left soft in the threaded end to prevent snapping under impact or pressure. It is bored to receive a lubricating fitting at either end. Eighteen sizes are available. Made by **Smith Bearing Co.**, 101 Bear Tavern Rd., Trenton, N. J.

For more details circle NED-603 on enclosed inquiry slip

FLOOR MACHINE for various floor maintenance uses

Variety of floor maintenance operations can be performed by Special 16 floor machine, designed with 1/2-hp motor and 16-in. brush for use on both 110 and 220-v ac. Only 10 1/2 in. high, it has cast aluminum chassis with motor and gear reduction unit enclosed. Besides standard scrubbing and polishing brushes, special attachments are available: solution tank for scrubbing floors or shampooing rugs; wire brushes for scouring concrete or steel; Carborundum block grinding disk for concrete and terrazzo; steel wool pad holder; and cushioned disk for sanding or buffing. Made by **S. C. Johnson & Son, Inc.**, Dept. NED, 1525 Howe St., Racine, Wis.

For more details circle NED-604 on enclosed inquiry slip

Aeroquip

FLEXIBLE HOSE LINES and DETACHABLE FITTINGS

1. Reduce inventory.
2. Reduce expensive downtime.
3. Permit you to salvage old hose lines.
4. Make possible immediate repair of hose line failures.
5. Eliminate the need for factory assembled hose lines.
6. Permit you to make hose lines to desired length as required.
7. Permit you to replace rigid tubing failures on the spot.
8. Eliminate the need for rigid tubing forms and jigs.
9. Permit you to make hose lines for mock-up installations rapidly.

AEROQUIP CORPORATION
JACKSON, MICHIGAN

FLEXIBLE HOSE LINES • DETACHABLE, REUSABLE FITTINGS • SELF-SEALING COUPLINGS • BREAKAWAY COUPLINGS • HYDRAULISCOPE
AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD

For more details circle NED-605 on enclosed inquiry slip

DAVIS NO. 300-S MOTOR OPERATED VALVE

Many industrial plants have found that the Davis No. 300-S Motor Operated Valve solves many flow control problems on process lines, zone heating, and FIRE EMERGENCY SHUT OFF. This valve features: Direct connection between valve stem and 2-position motor . . . 30 second timing . . . 25 watt power consumption; no stand-by consumption . . . Renewable disc . . . No internal packing . . . Visible position indicator . . . and Davis' famous tight-closing, non-sticking, single seat, pilot stem design.

No. 300-S is available in sizes from 1/2" to 6" for various service requirements. Other designs for higher pressures and larger sizes. *Bulletin on request.*

DAVIS REGULATOR CO.
2531 So. Washtenaw Ave., Chicago 8, Illinois

For more details circle NED-606 on enclosed inquiry slip

Standardize on STA-WARM COMPOUND MELTERS

Many nationally known manufacturers and large users of melted compounds have found that the wide and varied line of melting tanks, kettles and pots at Sta-Warm meets all of their production and laboratory requirements. In addition, Sta-Warm heated specialties . . . pipe, hose, valves, etc. . . . increase the flexibility of the tanks by adapting their use to the problems in the plant.

Sta-Warm also offers engineering service to help solve special or unusual compound melting problems with the result that you, too, can find at Sta-Warm all the help you require to reduce compound melting costs to rock bottom.

Inquire for help on your next specific problem.

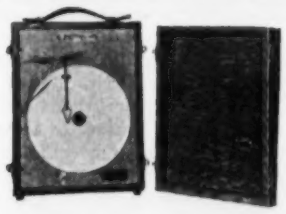
If you can tie a string around it, Sta-Warm can heat it for you.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

For more details circle NED-607 on enclosed inquiry slip

ANOTHER W&T PRECISION INSTRUMENT

THE PORTABLE DIRECT CURRENT RECORDER



FOR MEASUREMENT OF MICRO CURRENTS

The New W&T Portable Direct Current Recorder permits direct recording of minute electrical currents and voltages. Brief specifications are:

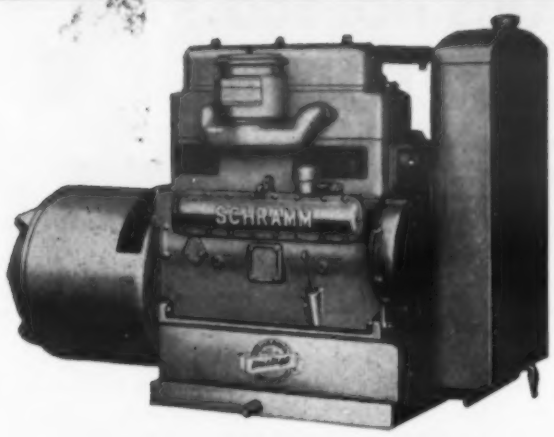
Type	Moving Magnet, Interchangeable coil.	Scale Length / Chart Diameter	2 1/2 inches. / 8 inches.
Sensitivity	1 part in 1000 of full scale range.	Chart Speed	1 revolution per 24 hours.
Minimum Range	0 to 100 microamperes.	Case	Highly finished hard wood.
Maximum Range	0 to 6.0 amperes.	Size	13" high by 10 1/4" wide by 5 1/2" deep.
Coil Adjusting Range	2.3 to 25 ampere turns.	Weight	10 pounds.

Write today for complete details — there's no obligation

WALLACE & TIERNAN PRODUCTS, INC.
ELECTRICAL MECHANISMS AND PRECISION INSTRUMENTS
Belleville 9, New Jersey • Represented in Principal Cities

A-89

For more details circle NED-608 on enclosed inquiry slip



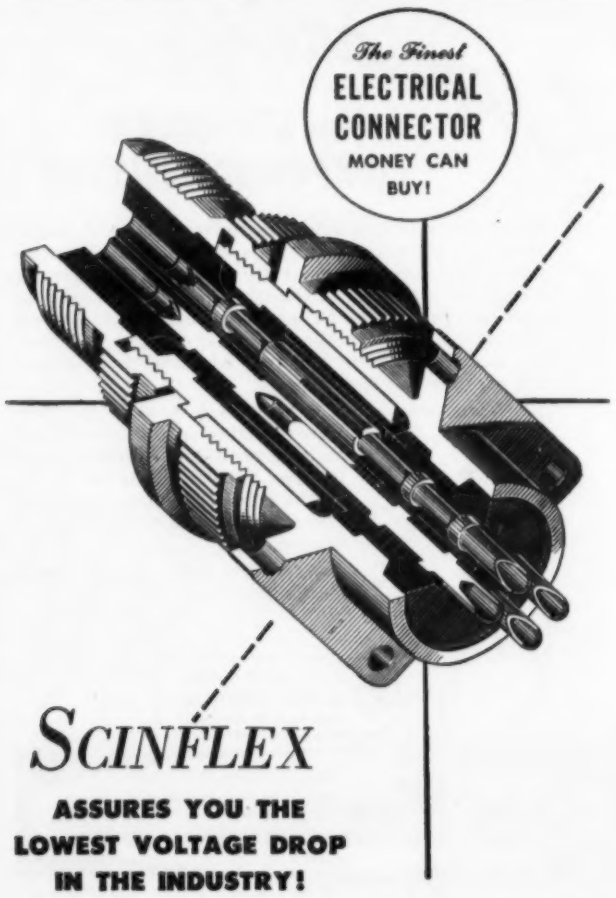
Direct Motor Drive Compressor With Cooling Unit

- NO ELABORATE FOUNDATIONS WHEN INSTALLING THE MODERN SCHRAMM AIR COMPRESSORS.
- VIBRATIONLESS . . . EASY TO MOVE . . . EASY TO INSTALL.
- FURNISHED COMPLETE WITH ALL NECESSARY ACCESSORIES.
- SIZES FROM ½ TO 100 HORSEPOWER, DIRECT CONNECTED, V-BELT DRIVE AND TANK MOUNTED.

Write for Bulletin SSB-51A

SCHRAMM INC. THE COMPRESSOR PEOPLE WEST CHESTER PENNSYLVANIA

▲ For more details circle NED-609 on enclosed inquiry slip ▲



SCINFLEX

ASSURES YOU THE LOWEST VOLTAGE DROP IN THE INDUSTRY!

When operating conditions demand an electrical connector that will stand up under the most rugged requirements, always choose Bendix Scinflex Electrical Connectors. The insert material, an exclusive Bendix development, is one of our contributions to the electrical connector industry. The dielectric strength remains well above requirements within the temperature range of −67°F to +275°F. It makes possible a design increasing resistance to flashover and creepage. It withstands maximum conditions of current and voltage without breakdown. But that is only part of the story. It's also the reason why they are vibration-proof and moisture-proof. So, naturally, it pays to specify Bendix Scinflex Connectors and get this extra protection. Our sales department will be glad to furnish complete information on request.

• Moisture-Proof • Radio Quiet • Single Piece Inserts • Vibration-Proof • Light Weight • High Insulation Resistance • High Resistance to Fuels and Oils • Fungus Resistant • Easy Assembly and Disassembly • Fewer Parts than any other Connector • No additional solder required.

BENDIX SCINFLEX
ELECTRICAL CONNECTORS

Bendix

SCINTILLA MAGNETO DIVISION of Bendix AVIATION CORPORATION
SIDNEY, NEW YORK

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.
FACTORY BRANCH OFFICES: 118 E. Providencia Ave., Burbank, Calif. • Stephenson Bldg., 6560 Cass Ave., Detroit 2, Michigan • Brouwer Bldg., 176 W. Wisconsin Avenue, Milwaukee, Wisconsin • 582 Market Street, San Francisco 4, California

▲ For more details circle NED-610 on enclosed inquiry slip ▲

PALLET STACKER KIT
adapts wood pallets for tiering

Using the Dubl-Duty pallet stacker conversion kit, any standard wood pallet can be changed into a tiering pallet for safe storage of crushable, fragile or irregular-shaped merchandise. Each kit contains four tiering attachments, standards and nuts and bolts. Attachments fit on ends of pallet stringers and are secured with bolts. Standards come in variety of interchangeable deck storage heights from 24 to 48 in. Attachments are flush with and outside of deck area. Self-aligning bearing plates prevent shifting, and key locks secure standards in correct stack position. Kits are of all steel welded construction and have unit capacity of 3000 lb. Made by **Elizabeth Iron Works, Inc.,** 508 Green Lane, Elizabeth B, N. J.

▲ For more details circle NED-611 on enclosed inquiry slip ▲

FLUORESCENT FIXTURES
direct light upward and downward

In CFI Day-Line series of fluorescent fixtures, 10 per cent of light is directed upward to eliminate dark ceilings and provide more eye comfort. Design allows current of air to flow around lamps and inside and outside of white porcelain enamel reflectors for cooler operation. Vibration-proof turret sockets are standard. One-piece reflectors fasten to channel with 2-in. captive wing nuts. Open and closed end types are available for two and three 75-w slimline lamps, two and three 40-w lamps and two 85-w lamps. Egg crate louvers, hangers and other accessories are available. Made by **Day-Brite Lighting, Inc.,** 5428 Bulwer Ave., St. Louis 7, Mo.

▲ For more details circle NED-612 on enclosed inquiry slip ▲

DO YOU KNOW? Practically any ferrous or non-ferrous metal can be custom-rolled into ultrathin precision metal strip to meet your specifications. Strip can be furnished in finished form in widths to 8 in. and thicknesses down to 0.0005-in., or customer's material can be rolled to order. Service offered by American Silver Co., Dept. NED, 36-07 Prince St., Flushing 54, N. Y.

▲ For more details circle NED-613 on enclosed inquiry slip ▲

AIR CYLINDER

BELLOWS AIR MOTOR COMES COMPLETE WITH ALL OPERATING CONTROLS BUILT-IN. NO EXTRA VALVES TO BUY. REQUIRES ONLY A SINGLE AIR CONNECTION. FIVE BORE SIZES: 1¼", 1¾", 2½", 3⅝", 4½". ANY STROKE LENGTH. MANY MOUNTING STYLES.

WRITE FOR BULLETIN CL-30 • ADDRESS: DEPT. NED-952

The Bellows Co.
AKRON 9, OHIO
1499

▲ For more details circle NED-614 on enclosed inquiry slip ▲

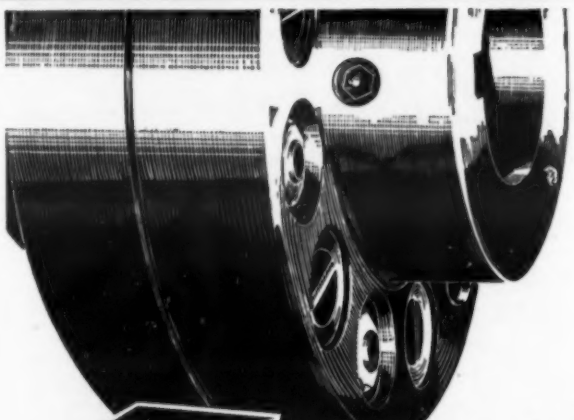
1ST IN METAL TOOL BOXES

CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition. Write for FREE book, including complete information.

Waterloo
VALVE SPRING COMPRESSOR CO.
WATERLOO, IOWA

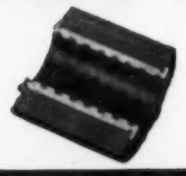
▲ For more details circle NED-615 on enclosed inquiry slip ▲



AJAX rubber bushed FLEXIBLE COUPLINGS

Standard of Industry For Over 30 Years

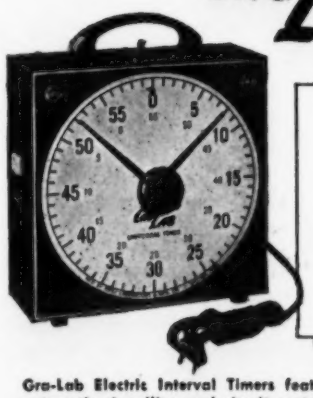
Safeguard bearings, gears, armatures, impellers and other costly working parts. Combine positive drive with resilient flexibility. Write for catalog.



AJAX FLEXIBLE COUPLING CO. INC.
Incorporated 1920
WESTFIELD, NEW YORK

▲ For more details circle NED-616 on enclosed inquiry slip ▲

3600 POSSIBLE SETTINGS ON GRA-LAB TIMERS



- Split-Second Accuracy
- Automatic Switching
- Giant 8" Dial
- Portable Models
- Panel Mount Models

Gra-Lab Electric Interval Timers featuring the giant 8" dial offer automatic signalling and circuit control throughout a range of 3600 distinct time settings on each model. Gra-Lab Timers, with vernier cam action, achieve the exclusive advantage of split-second accuracy and extended range . . . for every timing operation . . . at a surprisingly low cost!

ELECTRIC STOP CLOCKS—GRA-LAB Micro Timers with large 8" dials are available in 1/10 second or 1/1000 minute graduations for accurate measurements of elapsed time, in laboratory or production operations.

Contact your laboratory supply house today! . . . or write direct for complete catalog to

DIMCO-GRAY COMPANY 208 E. SIXTH STREET DAYTON 2, OHIO

▲ For more details circle NED-617 on enclosed inquiry slip ▲

NOW!.....the BIGGEST single sheet of TEFLON ever made!

Order this outstanding insulating material in sizes up to 60" x 72"—and save money, time and headaches.

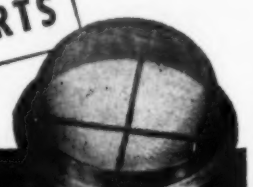
If you have used large gaskets laminated from the old small sheets of TEFLON, you've faced problems like blow-through and leakage. And you have fretted about waste, if you've had to cut two 13" discs—because that meant using two of the old 24" x 24" sheets—and throwing away the unused portions.

You pay no more per square inch for the new TEFLON size to get trouble-free gaskets, to get more cuttings per sheet. Requires less handling. Excellent for chemical table tops, other uses. Write today for specifications and TEFLON Brochure #201.

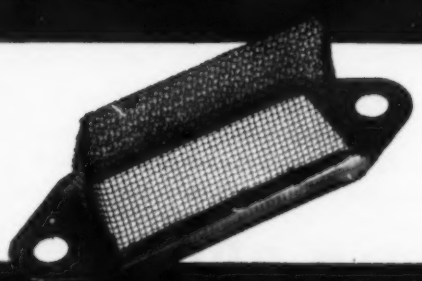
ELECTRONIC MECHANICS INC. 101 CLIFTON BOULEVARD, CLIFTON, NEW JERSEY

For more details circle NED-618 on enclosed inquiry slip

NEWARK Fabricated WIRE CLOTH PARTS



Available — a well-equipped plant with highly experienced fabricators.



Available — mesh cloth and space cloth made in our own plant.

All under one roof

Do you require parts made with one or more pieces of mesh cloth or space cloth — anything from 4 inch openings down to 325 mesh (105,625 holes/sq. in.)?

Our experienced fabricating service should be of value. We are in position to handle volume order business and, if desired, will be glad to help in designing the part requiring the metallic cloth. We know how to insert and fasten metallic cloth to get best results. We carry many standard sizes of wire cloth in stock. We have ample loom facilities to weave special cloths if necessary. We can handle any wire of any malleable metal.

This fabricated parts division of our business has grown by leaps and bounds. We have had many repeat orders. It could be due to the quality of wire cloth used and the care with which this cloth is assembled into the parts being fabricated.

NEWARK for ACCURACY

Ask for General Catalog "D".

Newark Wire Cloth COMPANY

351 VERONA AVENUE • NEWARK 4, NEW JERSEY

Philadelphia 3, Penna. 1211 Widener Bldg. San Francisco, Calif. 3100 19th St. Chicago, Ill. 38 N. Wacker Dr. New Orleans, La. 530 Maritime Bldg. Los Angeles, Calif. 1400 So. Alameda St. Houston, Texas P. O. Box 1979

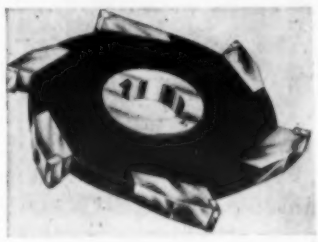
For more details circle NED-619 on enclosed inquiry slip

TANK GAGE simplifies liquid level reading

Full view direct reading counter in Varec liquid level gage for storage tanks provides accurate reading of foot increments and a dial for reading inches and fractions of tank contents. A Neg'ator motor housed with gage head maintains a predetermined constant tape tension, eliminating need for a counterweight. Installation of Look Box can be any desired height from ground or on top of tank. Gage can be used on all low pressure tanks up to 70 ft high. Gas tight Look Box can be installed on existing float-operated automatic tank gages utilizing ½-in. wide tape sheaves. Compensator permits adjustment to correct reading error caused by gravity change. Made by **Vapor Recovery Systems Co.**, Dept. NED, Compton, Calif.

For more details circle NED-620 on enclosed inquiry slip

MILLING CUTTER with carbide interchangeable blades



Interchangeable blades of this milling cutter have their trailing edge seated against an abutment in the periphery of the body. Cutting forces are transmitted to the body through this abutment. Heat treated body-bound screws locate the carbide tipped blades against the abutment through a conical seat. Bodies can be bladed for straight or alternate blade slotting or half side milling. Rake and shear angle changes are made by changing blades. Standard stock sizes available in plain and side milling cutters are in ½ and ¾-in. widths and 3 to 8-in. diameters. Special sizes upon request. Face and shell end mills of same design will be available. Made by **Kraus Design, Inc.**, Millit Div., 35 Flint St., Rochester 8, N. Y.

For more details circle NED-621 on enclosed inquiry slip

DO YOU KNOW? Next year you'll be able to drive in solid comfort regardless of the outside weather or temperature. That is, if you buy a new Oldsmobile or Cadillac equipped with the new Frigidaire air conditioner. Single control on the dash will regulate the mechanism which mounts on shelf in rear of trunk. Temperature can be maintained at any level by setting of thermostat. Developed by General Motors Corp., Frigidaire Div., 1509 Amelia St., Dayton 1, O.

For more details circle NED-622 on enclosed inquiry slip

PURE WATER DISTILLED WATER? PROBLEMS SOLVED WITH *Barnstead* EQUIPMENT

DEMINERALIZED WATER?

In hundreds of manufacturing processes, where complete purity is needed, Barnstead Stills provide the highest-quality, lowest-cost, chemically pure, sterile water from ½ to 1000 gallons per hour. With over 100 different models to choose from, Barnstead can provide the exact still to fit your particular needs. For Barnstead Laboratory and Industrial stills are the proven standard of the scientific and industrial world.

Where modern manufacturing processes require only high-test mineral-free water, Barnstead Demineralizers are the best producers . . . 5c per 1000 gallons with a minimum of supervision and maintenance. Many new industries are turning to Barnstead Demineralized Water for greater production, fewer rejects and better quality control.

WRITE

Catalog #123 gives both sides of the Pure Water Picture. Since Barnstead makes both stills and demineralizers, you'll find this catalog complete, authoritative, unbiased. Write Today!

First in Pure Water since 1878

Barnstead STILL & STERILIZER CO.

16 Lanesville Terrace, Forest Hills, Boston 31, Mass.

For more details circle NED-623 on enclosed inquiry slip

just SAW that's all! WITH THE **KETT** PANEL CUTTING SAW

• SAVE TIME---SAVE MONEY
• NO DRILLING---NO FILING---NO DEBURRING

Just "plunge" right in and cut . . . everything from cardboard to steel. Follow curves or contours . . . zip through the toughest cutting jobs quicker and easier. Typical capacities: 12 ga. steel, 3/16 in. aluminum, ¼ in. masonite, plywood, Amor Ply, and plastics. Interchangeable heads permit capacities up to ½ in. in soft rigid materials. A variety of blades for hard tempered or soft aluminum, copper, brass, lead, cast iron, etc., are available. Your present electric or pneumatic drill motor may be used for the power unit. Write for Catalog E-9 showing time-saving KETT tools.

The KETT TOOL COMPANY 5 East Third St., Cincinnati 2, Ohio

For more details circle NED-624 on enclosed inquiry slip

Mecco SAFETY INSPECTORS' HAMMERS WITH INTERCHANGEABLE INSERTS

5 HAMMER END STYLES: Regular Testing, Ball End, Medium Testing, Blunt Point, Prick Point

Ideal for inspection or piece work identification, etc., Safety Inspectors' Hammers are available in five standard sizes—½#, ¾#, 1#, 1½# and 2#. Steel inserts for any identification or inspection purposes are furnished with any desired letter, figure, symbol or design.

Write for complete data TODAY

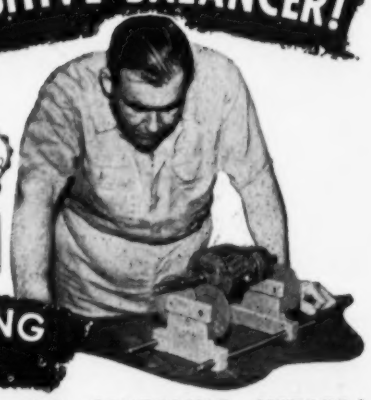
M.E. CUNNINGHAM CO. SAFETY STEEL STAMPS

1055 Chateau Street • Pittsburgh 33, Pa.

For more details circle NED-625 on enclosed inquiry slip

SUPERSENSITIVE BALANCER!

New CROWN BALANCING WAYS



NO CENTERING NEEDED!

• Eliminates trial and error method of detecting "heavy spots" in rotating parts. Free turning discs, mounted on ball bearings insure least friction and highest possible sensitivity. Load Capacities of 400 to 5000 lbs., swing 10" to 60". Easily portable.

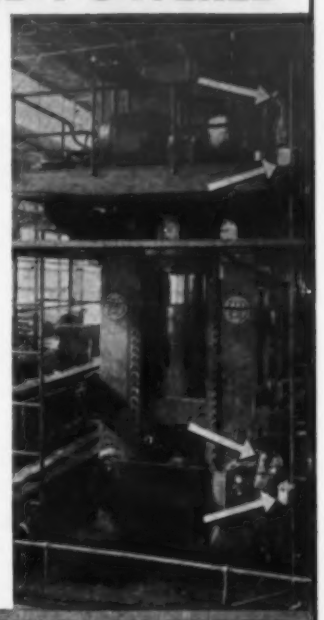
Gives Quick Static Balance of ARMATURES, FLY WHEELS, CRANKSHAFTS, FANS, etc.

WRITE FOR DETAILS

CROWN INDUSTRIAL PRODUCTS
406 Borden Avenue
Sycamore, Ill.
Please send catalog data and prices on CROWN Balancing Ways.
Name
Company
Address
City Zone State

For more details circle NED-626 on enclosed inquiry slip

U.S. I. SOUND POWERED TELEPHONES HELP ADJUST GIANT PRESS



After assembly, it takes two skilled men to adjust Lake Erie Engineering Corporation's 26-foot high, two million pound, artillery shell press. Cooperative precision adjustments, between one tester and the other are imperative. There must be no misunderstanding — even in a noisy shop.

To insure "correctly interpreted instructions" Erie supplies each tester with a complete U.S. I. Sound Powered Station. The result is conversational clarity, portability, and without the fuss of batteries.

WRITE for CATALOG Y

▲ For more details circle NED-627 on enclosed inquiry slip ▲

Never Before!

. . . SO MUCH POWER PER POUND

MEET the new Rotor Vertical Air Grinders! Never before have you had so much power in vertical air grinders . . . for such light weight! They're well balanced . . . easy on the operator. Here are *new* features to speed up your metal removal. *Write today for Bulletin No. 40.*

AIR O'TOOL

THE ROTOR TOOL CO.
CLEVELAND, OHIO

▲ For more details circle NED-628 on enclosed inquiry slip ▲

A TORIT DUST COLLECTOR . . .

at Four to One Still Your Best Bet!

TORIT FB TYPE Dust Separator

Torit also manufactures a line of cyclone type dust separators. Sizes up to 5 H.P., with or without after-filters.

Here four grinding wheels are in constant use finishing small parts, yet this 1½ H.P. Model 81 Torit Dust Collector completely eliminates any abrasive dust hazard to operators or to finished parts.

The efficient, self-contained design of Torit Dust Collectors permits compact set ups like this. There is no work interference, piping is minimized, and operating costs are low because this Torit Dust Collector runs only when the wheels are in operation.

Solve *your* dust problems with Torit Dust Collectors. Models and sizes for standard and special dust-collecting problems. Ask for details and the latest Torit catalog.

TORIT
MANUFACTURING CO.
298 Walnut St. St. Paul 2, Minn.

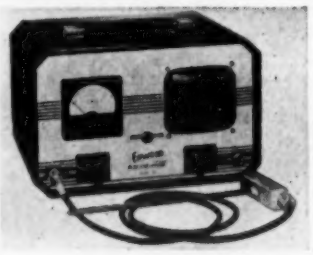
▲ For more details circle NED-629 on enclosed inquiry slip ▲

DISPENSING & METERING UNIT for liquefied petroleum gas

Piston meter, differential valve, strainer, check valves and service valves are incorporated in the 760 unit for dispensing and metering liquefied petroleum gas. Bronze meter is designed for 350-psi working pressure at atmospheric temperatures. It is two-piston, reciprocating, positive displacement unit with flow range from 5 to 30 gpm. Piston meter can be set with small nonreset, small reset, large reset and or printing registers. Parkhill Wade system keeps the product in a liquid state throughout the metering operation. Made by **Rockwell Mfg. Co.,** Dept. NED, 400 N. Lexington Ave., Pittsburgh 8, Pa.

▲ For more details circle NED-630 on enclosed inquiry slip ▲

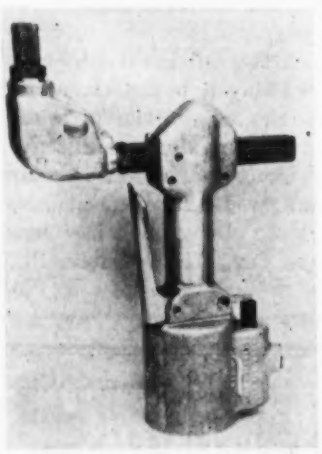
NOISE & VIBRATION DETECTOR unaffected by airborne noises



Incorporating a sensitive vibration pick-up probe and three-stage amplifier, the Electro-Probe electronic trouble spotter accurately locates and analyzes source of noises and vibrations in mechanical devices. Instrument is unaffected by airborne noises because it is sensitive only to vibrations at point of contact. Speaker and headphones provide audible comparison of vibration sounds within range of 60 decibels, while calibrated meter gives visual indication. Device can also locate leaks and stoppages in fluid piping systems and structural vibrations; analyze airborne sounds; and inspect parts and subassemblies. It operates on 36-w 110-120-v 60 cycle ac and weighs 14 lb. Made by **Erwood, Inc.,** 1772 Berteau St., Chicago 13, Ill.

▲ For more details circle NED-631 on enclosed inquiry slip ▲

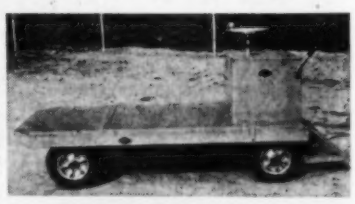
RIVETING ANGLE ADAPTER expands scope of blind riveting



When used in conjunction with either a Huck No. 94 hand, or No. 93 air riveting tool, this angle adapter simplifies assembly of previously inaccessible deep channels, hard to reach corners and otherwise impossible to rivet locations. One person from one side of work can now drive 1/8, 5/32 and 3/16-in. diameter self-plugging or pull-through blind rivets in clearance space of only 4 in. from nose of riveting tool to back face of angle adapter. Device is available from stock. Made by **Huck Mfg. Co.,** 2482 Bellevue Ave., Detroit 7, Mich.

▲ For more details circle NED-632 on enclosed inquiry slip ▲

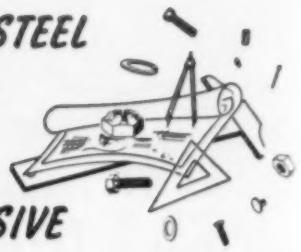
POWER TRUCK facilitates handling of long objects



A loading surface of 21 sq ft, removable 24-in. stanchions which can be stowed in rack under platform and room on each side of engine housing for carrying long objects are features of this 1-ton materials-handling power truck. It is chain-driven by 3.10-hp Briggs & Stratton engine equipped with starting crank. Added features are riding platform, oversize disk brake, foot-operated accelerator, single lever transmission control, and steering wheel with spinner. An automatic safety device stops truck in case of operator failure. Frame is of electrically welded 3-in. channel steel and has friction bearings throughout. Pneumatic tires on cast aluminum wheels, plus oversize engine muffler result in quiet operation. Made by **Consolidated Industries, Inc.,** 515 Mixville Rd., West Cheshire, Conn.

▲ For more details circle NED-633 on enclosed inquiry slip ▲

When you think of
STAINLESS STEEL FASTENINGS
think first of
ANTI-CORROSIVE



Anti-Corrosive has millions of stainless steel fastenings *in stock* for immediate delivery . . . plus exceptional production capacity that can fill your requirements beyond stock items faster, *better!*

FREE — Write for Slide-Chart 52U which instantly identifies A-N nos. pertaining to stainless fastenings.

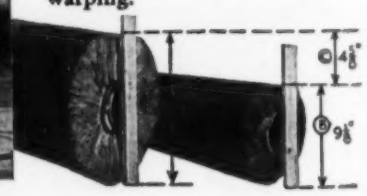
25 YEARS OF LEADERSHIP IN FASTENINGS OF STAINLESS STEEL

Anti-Corrosive Metal Products Co. Inc.
Manufacturers of STAINLESS STEEL FASTENINGS
CASTLETON ON HUDSON, NEW YORK

▲ For more details circle NED-634 on enclosed inquiry slip ▲

5 times the Wear

A Fullergript fiber and wire mixture brush before use in floor sweeper.
B Same brush after 10 months service — 5 times as long as the ordinary brush lasts.
C Note that although brush has worn down 4⅝", there is no evidence of material shedding, loose backing or warping.



Users of power-driven floor sweepers consistently emphasize the longer brush life, the improved sweeping efficiency and the saving of man-hours with Fullergript brushes! Write us for information.

FULLER BRUSH
FULLERGRIPT
At home... in business, too

THE FULLER BRUSH COMPANY • INDUSTRIAL DIVISION
3530 MAIN STREET • HARTFORD 2, CONN.

▲ For more details circle NED-635 on enclosed inquiry slip ▲

Pereco Electric Furnaces

• Space-Saving "CB" Series

for Laboratory and shop use
2500° F. for normal operation
3000° F. for short periods

Simple to install and easy to operate, this CB-55 (also larger sizes) handles exact pilot operations and other heat-treating work requiring close control of extremely flexible heat cycles. Size: 32" d. x 32½" w. x 64" h., with chamber 12" d. x 8½" w. x 6" h. Uniform heat from 3 silicon carbide elements over and 3 under the chamber. All controls on front panel: automatic temperature controller, input meter, 36-tap auto-transformer with switch interlock, cut-off switch, and safety pilot light. Wedge-fit counterbalanced door. 230-v., 60-cyc., 1-ph. A.C., with variable input 3.5 to max. 11 kw. Atmosphere connections optional. Write for bulletin today.

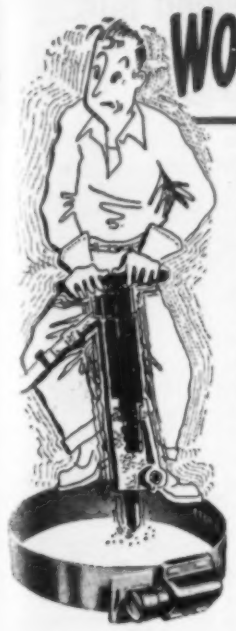
PERECO also makes standard and special furnaces for temperatures from 450° F. to 5000° F.

PERENY EQUIPMENT COMPANY
Dept. G, 893 Chambers Rd., Columbus 12, Ohio

▲ For more details circle NED-636 on enclosed inquiry slip ▲

AERO-SEAL WORM-DRIVE HOSE CLAMPS

WON'T SHAKE LOOSE!



Wherever you have to clamp a hose connection tight . . . or wherever you want to lock two objects of any shape together in an unshakeable bond . . . your best bet is AERO-SEAL.

Threads of steel worm engage deep into slots in stainless steel band — hold tight under extreme vibration in automotive, aircraft and industrial applications. CAN'T SHAKE LOOSE.

One-Hand Installation

Install an Aero-Seal any place you can reach with thumb and one finger. Self-feeding when band engages worm threads. Thumb-grip and screwdriver types.

Re-use Again and Again

When hose is worn you RE-USE the same Aero-Seal again and again. RE-USE Aero-Seals on temporary clamping jobs—they conform to any shape without damaging band.

Use of stainless steel subject to government regulations.

"Aero-Seal"® WORM DRIVE HOSE CLAMPS

ANOTHER BREEZE MARK PRODUCT

BREEZE CORPORATIONS, INC.
41 South Sixth St. Newark, N. J.

For more details circle NED-637 on enclosed inquiry slip

CUTLER-HAMMER
Small Drum Controllers *for Every Purpose*

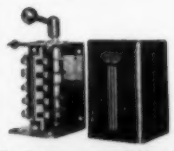
• Here are small drum controllers of every size and for every purpose . . . reversing and non-reversing . . . single and multi-speed . . . for single phase, separate winding, reconnected winding and other squirrel cage motors . . . with radial or tear drop handle, rope, or shipper rod lever actuation . . . surface, cavity or switchboard mounting.

But over and above these features are the concern for correct design, the integrity of engineering purpose and excellence in manufacture that have made Cutler-Hammer products the standard of performance everywhere. Insist on the genuine; it costs no more. CUTLER-HAMMER, Inc., 1377 St. Paul Ave., Milwaukee 1, Wisconsin. *Associate:* Canadian Cutler-Hammer, Ltd., Toronto, Ont.

Where These Controllers Can Be Used...On

- Woodworking machines
- Small overhead hoists
- Machine tools
- Conveyors
- Tire building machinery
- Commercial laundry equipment
- Electrically operated doors
- Other small motor driven processing equipment

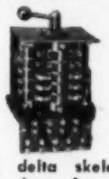
Cavity mounted selector switch—Size 00



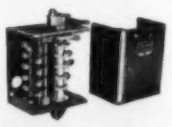
Surface mounted Size 1 reversing drum

Four-speed non reversing Size 1 drum

Two handle drum for 4 speed, full reversing motor



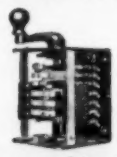
Star delta skeleton type drum for machine cavity mounting



Lathe master switch, shipper rod operated

Rope operated reversing drum for use on small hoists

Self centering Size 0 reversing drum with tear drop handle



Primary resistor type reversing drum for use on small cranes.

Special multi-speed drum for floor scrubber

CUTLER-HAMMER MOTOR CONTROL C-H

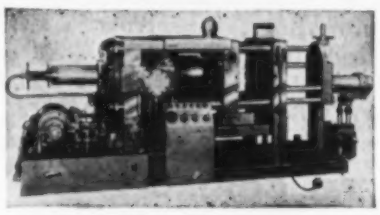
For more details circle NED-638 on enclosed inquiry slip

PORTABLE PUMP
quickly attaches to chain saw

This 18-lb portable pump can be attached in less than 1 minute to a Mercury engine powered Disston model DA-211 chain saw without any modification or use of tools. Pump delivers 50 gpm water at 125 psi, making the pump-saw combination a highly practical fire fighting tool, especially for forest fires. Total weight of engine and pump is 63 lb. Made by **Kiekhaefer Corp.**, Dept. P-9, 660 S. Hickory St., Fond du Lac, Wis.

For more details circle NED-639 on enclosed inquiry slip

DIECASTING MACHINE
for aluminum, brass and magnesium



Pressures up to 40,000 lb are developed and held by this Wedgelock cold chamber diecasting machine without opening of die faces and flashing. Dies with 7½-in. deep cavities can be run with an opening up to 15 in. maximum. Die opening can be set at any point from 10 to 15 in. Die height is micrometer adjusted to within 0.001-in. Hydraulic pressure is adjustable from 1000 to 2000 psi. Made by **Cuyahoga Industries**, 17920-N Waterloo Rd., Cleveland 19, O.

For more details circle NED-640 on enclosed inquiry slip

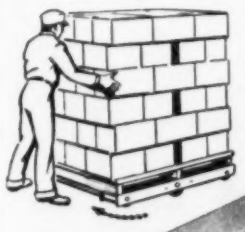
FLOOR MACHINE
features portability, light weight

Recommended for wood, tile, asphalt, concrete, rubber, terrazzo or marble floors, model A.L.M. 13 floor machine will scrub, polish, steel-wool, disk sand and buff. Portable and lightweight, machine has 13-in. brush spread and is powered by GE heavy duty 115-v 60 cycle motors. Brush is driven at 172 rpm. Tilting handle can be rotated so that 25-ft UL-inspected trailing wire can be on either side. Mar-proof bumper guard protects machine and walls. Safety-type bar switch on handle stops machine when operator releases grip. Machine is also equipped with mixed fiber brush for polishing. Made by **American Floor Surfacing Machine Co.**, 598 S. St. Clair St., Toledo 3, O.

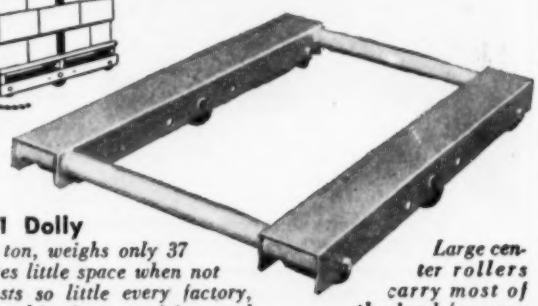
For more details circle NED-641 on enclosed inquiry slip

New Pallet Dollies that STEER Easy

Steers like a two-wheel cart



New No. 704 OLSON Dollies turn like a two-wheel cart—give complete mobility to pallets in factories, warehouses, shipping and receiving departments, trucks, trailers, freight cars, etc. Weigh little—easily carried. Compact—require little space. Cost little—pay for themselves in a few hours use.



OLSON No. 704-1 Dolly

—carries a ton, weighs only 37 lbs. Requires little space when not in use. Costs so little every factory, warehouse, shipping, receiving and transport department should be completely equipped. Send for Bulletin.

Large center rollers carry most of the load for easy steering. Smaller rollers at ends act as stabilizers.

SAMUEL OLSON MFG. CO., INC.
2423 Bloomingdale Ave., Chicago 47, Ill.

For more details circle NED-642 on enclosed inquiry slip

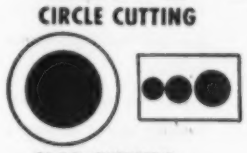
WORKING SHEET OR PLATE STEEL?

LOOK at what PULLMAX CAN DO

STRAIGHT CUTTING

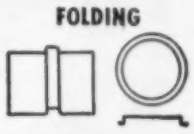
Straight cutting, circle cutting, free hand cutting, slot cutting, beading, folding, louvering and many variations of these operations . . . ALL ON ONE PULLMAX MACHINE! Easy to set up and change tools . . . seven sizes of machines work materials up to 11/32" in mild steel . . . also works stainless steels, non-ferrous metals, wire mesh and plastics.

CIRCLE CUTTING

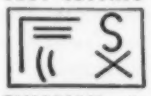


WRITE FOR LITERATURE

FOLDING



SLOT CUTTING



BEADING

FREEHAND

PULLMAX—A complete sheet and plate working shop in one machine.

AMERICAN PULLMAX CO., INC.

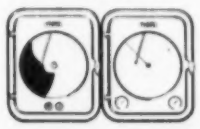
2457 N. SHEFFIELD AVENUE, CHICAGO 14, ILLINOIS

For more details circle NED-643 on enclosed inquiry slip

POWERS

Air Conditioning Control Helps produce more UNIFORM Quality Products

John Morrell & Co. Hams are famous for their fine flavor. Their modern air conditioned smoke houses shown above are POWERS controlled.



POWERS Time Cycle Recording Regulator

High quality standards are rigidly maintained in the above smoke houses. Accurate regulation of temperature, humidity and smoke penetration is assured by POWERS pneumatic instruments controlling diaphragm valves, dampers and static pressure regulators.

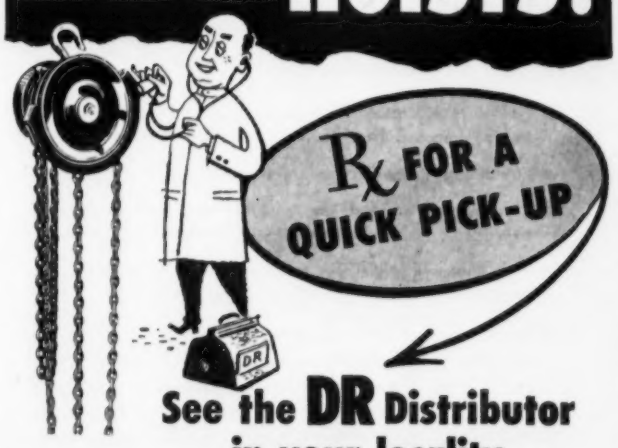
Next time you want better temperature and humidity control for any process, heating or air conditioning, contact our nearest office. There's no obligation. (a58)

THE POWERS REGULATOR CO.
3400 Oakton St., Skokie, Ill.

60 Years of Temperature and Humidity Control • Offices in Over 50 Cities

For more details circle NED-644 on enclosed inquiry slip

HOW ARE YOUR HOISTS?



See the DR Distributor in your locality

Put your hoisting equipment worries in the hands of a specialist. Your industrial distributor can tell you about David Round equipment and get you dependable information on specially engineered hoisting installations. Literature on standard units available free from David Round & Son, 35025 Aurora Road, Cleveland 22, Ohio.

Manufacturers of CHAIN HOISTS • ELECTRIC HOISTS • I-BEAM TROLLEYS • CRANES • WINCHES

David Round DR DAVID ROUND HOISTS & CRANES

For more details circle NED-645 on enclosed inquiry slip

BIG JOE
Custom Platform Lift Model 14-S

Easy movement over rough or uneven flooring with roller bearing 6" casters and 10" wheels.

Maximum safety with positive locking 2-wheel brakes.

Powerful hydraulic assembly raises capacity loads with minimum of effort. Release control assures smooth and accurate stops.

Capacity—750 lbs.
Lifting Height-56"
Price $256.50 F.O.B. Chicago.

Write for Specifications on All Models

BIG JOE MANUFACTURING COMPANY
184 N. FRANKLIN ST., CHICAGO 6, ILLINOIS

▲ For more details circle NED-646 on enclosed inquiry slip ▲

safe, long-lasting
MAGCOA
light-weight HEAVY-DUTY
DOCKBOARDS
will cut your handling costs

Here is the valuable information about MAGCOA Light-weight HEAVY-DUTY DOCKBOARDS contained in this new bulletin.

- how to reduce dock accidents—protect men, equipment and loads—because they are light and easy to handle.
- how they speed up loading and unloading.
- how they are braced like a bridge and individually engineered for your requirements—built to last indefinitely.
- how exclusive MAGCOA features make for greater maneuverability, prevent run-offs, prolong tire-life.

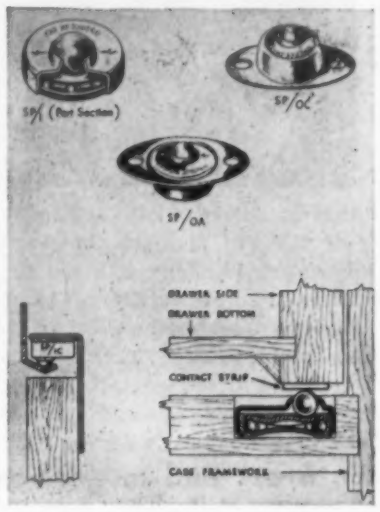
Above all, you'll discover why so many top industrial companies have standardized on MAGCOA Dockboards for freight car and truck loading *in all their plants*. At the same time, ask for new literature showing how Magcoa's magnesium fabricating experience and facilities can help you improve your products through use of light-weight, heavy-duty magnesium.

MAGNESIUM COMPANY OF AMERICA
EAST CHICAGO 6, INDIANA – *Representatives in Principal Cities*

DIVISION OFFICES:
N.Y.C. 20, 30 Rockefeller Plaza
WASHINGTON 5, D.C., Walker Bldg.
LOS ANGELES 34, 8922 W. 25th St.
PHILA. 18, 8001 Southampton
HOUSTON 17, 7657 Moline St.
SAN FRANCISCO 4, Russ Bldg.

For **Dockboard** details circle NED-647 on inquiry slip
For **Fabrication** details circle NED-648 on inquiry slip

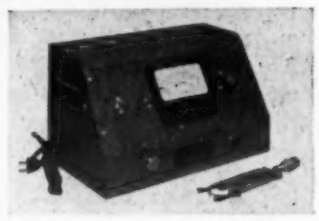
FRICTION ELIMINATORS
for sliding doors, cabinets, drawers



Sliding motion of reciprocating mechanisms is made easy by use of sun and planet friction eliminators, a ball bearing device that can be glued into woodwork or fitted by means of attached flanges. Plain and flanged types are available. Device consists of a ball bearing set on a circular track grooved into a small metal disk which rests on a ring of smaller ball bearings. Sizes from 5/8 to 1 1/8 in. diameter carry loads from 25 to 60 lb. All are prelubricated. Distributed by **Alpha Tool & Supply Co.**, Dept. NED-A, P. O. Box 119, Westwood, N. J.

▲ For more details circle NED-649 on enclosed inquiry slip ▲

AUTOMATIC LEVEL CONTROLS
for low temperature liquids use



Designed for industrial application and laboratory work with low temperature liquids, two automatic level controls are factory-calibrated and require no further adjustment under normal use. In both models the solenoid valve can be manually operated. Pilots and meters show when the gage is being supplied with current and when the valve is open. Model A is a time-rated control with one sensitive element. Valve is controlled for maximum level by a gage and an automatic time controls the minimum level. Settings can be predetermined through a cycle up to 2 hours. A timer by-pass switch permits work without cycling. Model B is a two-point control without any time element. Sensitive elements are mounted top and bottom. Both models operate on single phase 110 v, 60 cycles ac. Made by **Hofman Laboratories, Inc.**, Dept. A, 214 Wright St., Newark 5, N. J.

▲ For more details circle NED-650 on enclosed inquiry slip ▲

DO YOU KNOW? By using glass braid instead of customary cotton, sizes of No. 10 to 14-gage BX armored cable have been reduced. It is also lighter in weight so that it is easier to handle and install. Improved resistance to impact and crushing is also reported. Developed by General Electric Co., Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn.

▲ For more details circle NED-651 on enclosed inquiry slip ▲

Put THIS on Your Shelf!

RBC's
PITCHLIGN Trade Mark
ROLLER BEARING CATALOG

Get all the detailed information on RBC's new PITCHLIGN bearings! See for yourself how they incorporate a series of important features never before achieved in bearings with small diameter rollers. Have the full story at your fingertips. Write for Bulletin SF. 966

WRITE TODAY!

RBC
ROLLER BEARING COMPANY OF AMERICA
TRENTON, N. J.

▲ For more details circle NED-652 on enclosed inquiry slip ▲

The broad Trumbull line helps you get the "right" breaker

You name the job, Trumbull has the circuit breaker to do it—and do it well.

By sticking to Trumbull you make sure you'll always find the "right" breaker – regardless of the duty the particular installation calls for!

There are enclosed units of general-purpose, flush-mounting, semi-dust-tight, and waterproof and dust-tight varieties. Breakers are encased in rugged black phenolic and are available separately without special enclosures. Ratings from 10 through 600 amps, at voltages of 125 to 600 a-c or 125 to 250 d-c, fully Underwriters approved and with interrupting ratings in accordance with NEMA standards up to 25,000 amps in 600-amp frame. One-, two- or three-pole. And don't forget the new plug-in units with *quick-make, quick-break* action. Send for bulletin and application section today.

TRUMBULL ELECTRIC
DEPARTMENT OF GENERAL ELECTRIC COMPANY
PLAINVILLE, CONNECTICUT

▲ For more details circle NED-653 on enclosed inquiry slip ▲

hydraulic PUMPS

3 types, 11 sizes, for continuous pressures up to 1000 p.s.i. . . . in some sizes, up to 1200 p.s.i. continuous, 1500 intermittment. Deliveries from .4 g.p.m. at 1800 r.p.m. to 40 at 1200.

GEROTOR MAY CORP., Md. Ave. & Oliver St., Baltimore 3, Md. . . Phone MUlberry 8585

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Hy-Test Steam Hose...

Can't Burst!

For handling superheated or saturated steam in any heavy-duty industrial steam service. When long service finally causes the tube to fail, the braided-wire plies permit the steam to merely *seep* through—giving workmen ample warning that replacement is needed.

See your local NYB&P Distributor for any industrial rubber products. He can save you time and money.

NEW YORK BELTING & PACKING COMPANY
1 MARKET STREET, PASSAIC, NEW JERSEY

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OFFERS YOU OVER 15,000 TYPES, SIZES AND RATINGS OF ELECTRIC HEATERS FOR ALL YOUR NEEDS

FAST • EFFICIENT • ECONOMICAL • EASY TO INSTALL

This Booklet Shows You How To Save Money with Electric Heat

It's packed with ideas you'll find useful. Get your copy now!

Regardless of your heating problems, there are Chromalox Electric Heaters that give you the heat you want when you want it. Compact Chromalox Units provide dependable, around the clock service; they are easily installed in existing or new equipment. Operating temperatures can be quickly regulated manually or thermostatically to fit the work requirements in your plant.

1D-19

Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pgh. 8, Pa.

See other advertisement on page 4.

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-656 on enclosed inquiry slip

Direct Wire to Closer COUNTROL

Added Evidence that

Everyone Can Count on VEEDER ROOT

This Veeder-Root Reset Magnetic Counter, specially designed for flush mounting on panels and in instrument-clusters, can be connected in series to any device that has a contact arrangement. And it can be located at central *Countrol*-points, at a distance from the machine or process on which performance-figures are needed. Write for full facts.

VEEDER-ROOT INCORPORATED

"The Name That Counts"

HARTFORD 2, CONNECTICUT

Chicago 6, Ill. • New York 19, N. Y. • Greenville, S. C.

Montreal 2, Canada • Dundee, Scotland

Office and Agents in Principal Cities

For more details circle NED-657 on enclosed inquiry slip

HONING MACHINE
uses separate portable coolant unit

Designed for honing keyways, spline gears, most broken surfaces and internal finishing operations on a bench setup basis, model J honing machine has honing range from 0.185 to 2.500 in. diameter. Speed is infinitely variable between 400 and 1000 rpm without belt changes. Permanent type mandrels fit spindle with bayonet lock. Machine is 25 in. high. Portable coolant unit can be used with the model J or any dry honing machine. It slides in and out of permanent mounting bracket fitted at each machine location, making possible use with several hones. Coolant unit weighs 44 lb, has a 21¼ x 30¼ in. splash pan, flexible hose and adjustable flow nozzle. Both units made by **Superior Hone Corp.**, 1624 Elreno St., Elkhart, Ind.

For more details circle NED-658 on enclosed inquiry slip

SAND BLAST UNIT
removes rust, scale and paint and prepares surfaces for refinishing

Three sizes of model VB Belmont Sand blasters are available for blast cleaning operations. Both stationary and portable units, latter equipped with axles and rubber-tired wheels, can be supplied. Sand capacities are 125, 600 and 1000 lb, and units require 13, 85 and 197 cfm of air at 100 psi which can be supplied by 7, 21 and 48-hp compressors, respectively. Tungsten carbide blast nozzles are standard, and they have exceptionally long life under continuous service.

Equipment can be used to remove paint, scale and rust. Resultant surface is ideal for painting, welding, metal spraying, bonded coating and other operations. Entire top is dished to receive sand. Air operated filling valve simplifies refilling chamber with sand. Single three-way valve affords convenient control. Tank is built to ASME Code for pressure vessels. Standard equipment includes 12½ ft of 1-in. blast hose with couplings, nozzle holder, tungsten carbide nozzle, legs, brass mixing valve, air operated filling valve, lifting holes and access hole. Made by **Vacu-Blast Co.**, 375 Peninsular Ave., San Mateo, Calif.

For more details circle NED-659 on enclosed inquiry slip

The "BLUE CHIPS" are Careful about Metal Chips like these

BLUE CHIP COMPANIES in the food industry take every precaution to protect product purity and their good names. They're the biggest users of Allis-Chalmers Electronic Metal Detectors. That extra effort to provide product purity is just one more reason they're on top. Can you afford to be less careful? Electronic Metal Detectors are the only sure way of detecting the presence of non-magnetic as well as magnetic particles in food packages. Spots particles as small as .047 inch in diameter. Unit fits production set-ups.

Call your nearby Allis-Chalmers district office for complete information, or write Allis-Chalmers, Milwaukee 1, Wis.

A-3712

ALLIS-CHALMERS

For more details circle NED-660 on enclosed inquiry slip

Ordering brushes?

Automotive
Aviation
Industrial
Fractional hp

try Speer first!

Need brushes? Speer's a specialist in just that field, making over 100 different grades for all applications. To make certain you get maximum efficiency, *every step* . . . extruding, molding, baking, finishing, application testing . . . is precisely controlled in Speer's own plants.

Write today for our free booklet "Speer Carbon Products"

A Speer application-tested brush for every use: motors • rotary converters generators • power tools subways • ignition systems starters • power plants Diesel locomotives windshield wipers accounting machines household appliances

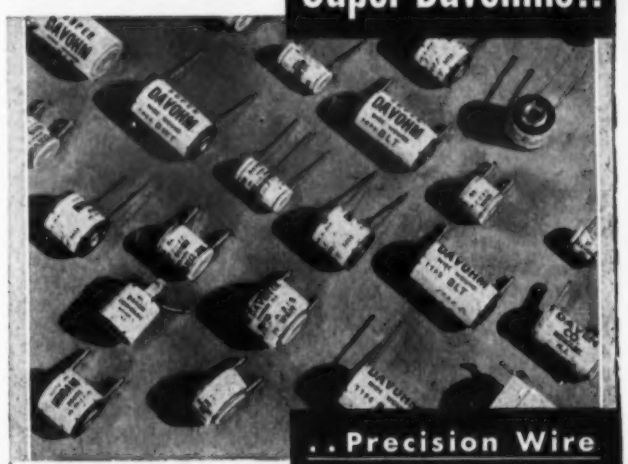
SPEER Carbon Co.

St. Marys, Pennsylvania

Jeffers Electronics Div. Speer Resistor Div. International Graphite & Electrode Div.

For more details circle NED-661 on enclosed inquiry slip

These Are Famous Super Davohms..



..Precision Wire Wound Resistors by DAVEN

Electronic Specialists for More Than a Generation

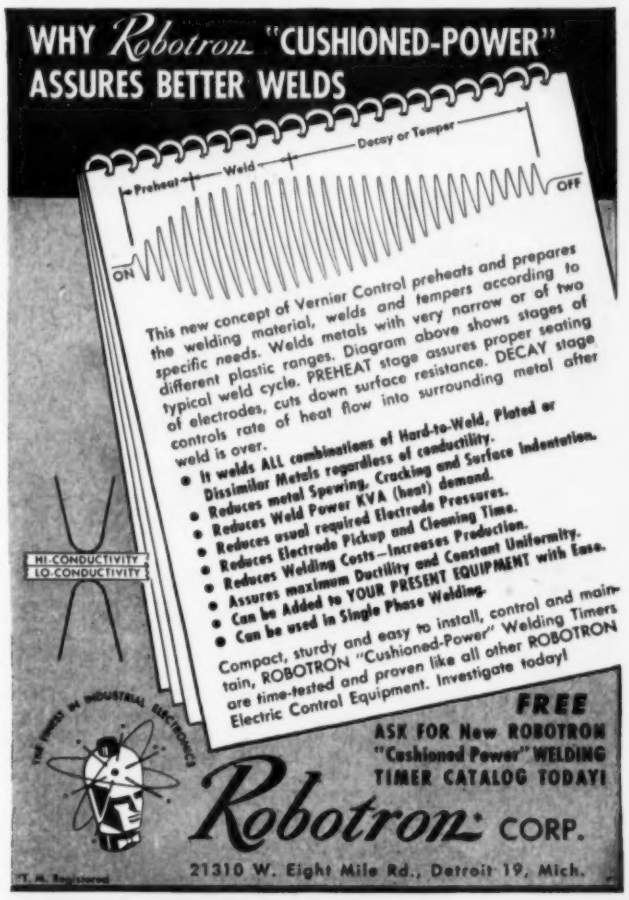
• Accuracies to .05% • All temperature coefficients • All types of mountings • Manufactured to famous DAVEN standards of precision • Excellent deliveries

Write for Catalog Data

THE DAVEN CO. 199 Central Ave. Newark 4, N. J.

For more details circle NED-662 on enclosed inquiry slip

WHY Robotron "CUSHIONED-POWER" ASSURES BETTER WELDS



This new concept of Vernier Control preheats and prepares the welding material, welds and tempers according to specific needs. Welds metals with very narrow or of two different plastic ranges. Diagram above shows stages of typical weld cycle. PREHEAT stage assures proper seating of electrodes, cuts down surface resistance. DECAY stage controls rate of heat flow into surrounding metal after weld is over.

- It welds ALL combinations of Hard-to-Weld, Plated or Dissimilar Metals regardless of conductility.
- Reduces metal Spewing, Cracking and Surface Indentation.
- Reduces Weld Power KVA (heat) demand.
- Reduces usual required Electrode Pressures.
- Reduces Electrode Pickup and Cleaning Time.
- Reduces Welding Costs—Increases Production.
- Assures maximum Ductility and Constant Uniformity.
- Can be Added to YOUR PRESENT EQUIPMENT with Ease.
- Can be used in Single Phase Welding.

Compact, sturdy and easy to install, control and maintain, ROBOTRON "Cushioned-Power" Welding Timers are time-tested and proven like all other ROBOTRON Electric Control Equipment. Investigate today!

FREE

ASK FOR New ROBOTRON "Cushioned Power" WELDING TIMER CATALOG TODAY!

Robotron CORP.

21310 W. Eight Mile Rd., Detroit 19, Mich.

For more details circle NED-663 on enclosed inquiry slip

DE WALT "3 adjustment action"

assures easier, faster performance!

Here's the ideal, all-purpose machine to streamline your cutting operations, help to increase production and cut costs.

De Walt's "3 adjustment action" allows you to position saw for any desired operation...in seconds!

You can make 15 set-ups, 15 different cuts...in less than 15 minutes! You get precision, speed, complete safety. A De Walt does the work of many machines—takes up the space of one. *Write for catalog to: DeWalt Inc., Dept. G-9, Lancaster, Pa.*

DeWalt Inc. DE WALT Lancaster, Pa.

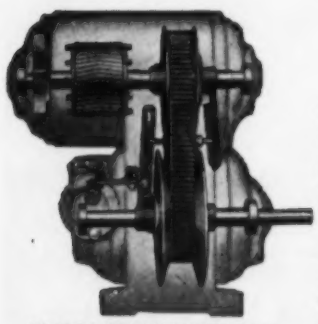
POWER SAWS

Subsidiary of AMERICAN MACHINE AND FOUNDRY COMPANY, New York

▲ For more details circle NED-664 on enclosed inquiry slip ▲

SPEED-TROLS INCREASE MACHINE OUTPUT 20%

When Morehouse Industries equipped the input pump on the latest model mustard mills with Speed-Trol, we increased output 20%, improved uniformity of product and product quality, reports Mr. J. P. Smoot. We attribute these advantages to Speed-Trol's accurate speed regulation, wide speed range, infinite speed variation.



STERLING SPEED-TROL

OUTSTANDING FEATURES: Infinite speeds—positive speed regulation—fingertip control—large indicator—positive pulleys—no springs—belt tension in proportion to load—protected—streamlined—Herringbone Rotor—through ventilation—versatile mounting—NEMA dimensions—shock absorbing—quiet operation—rugged—compact—dependable—long life.

70 ILLUSTRATIONS showing how Sterling Electric Power Drives reduce production costs. Write for Bulletin No. B-128.

STERLING ELECTRIC MOTORS

Plants: New York City 51; Van Wert, Ohio; Los Angeles 22; Hamilton, Canada; Santiago, Chile. • Offices and distributors in all principal cities.

▲ For more details circle NED-665 on enclosed inquiry slip ▲

Specify **T-J** FOR MORE WORK BETWEEN GRINDS

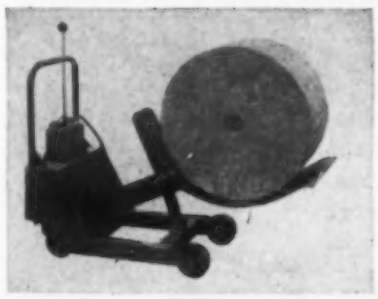
In die and forge shops everywhere . . . T-J Die Sinking Milling Cutters are today's top favorites . . . because they're "tops" for cutting tough die steels! T-J Cutters hold a sharp edge longer on job after job . . . less breakage! Made from an extremely high grade steel . . . properly machined . . . scientifically heat-treated and accurately ground. Wide range of styles and sizes. Send for new catalog 150. The Tomkins-Johnson Co., Jackson, Mich.

FOR TOUGH JOBS SPECIFY T-J

TOMKINS-JOHNSON

▲ For more details circle NED-666 on enclosed inquiry slip ▲

HEAVY ROLL HANDLER for use in restricted areas



Rolls of paper, cloth, aluminum, rubber belting and other materials weighing up to 1000 lb can be loaded into and unloaded from presses, looms and other roll feed machinery by this hand-powered hydraulic lifter. Built to individual requirements, unit has small wheelbase to enable use in restricted areas. It can be furnished with trunnions for handling rolls with shaft or spindle, or with scoop for handling cylindrical objects with no shaft. Lifter rolls on two rigid and two swivel steel casters. Floor lock and electric hydraulic power unit are available. Made by **Service Caster & Truck Corp.**, 578 N. Brownswood Ave., Albion, Mich.

▲ For more details circle NED-667 on enclosed inquiry slip ▲

FLUORESCENT BALLAST for instant-start lamps

Equivalent in size and wattage loss to current models of ETL-certified series-sequence ballasts, Dynatran ballasts for lead-lag operation of instant-start hot cathode fluorescent lamps are offered in two models. Model 628-408 is for two 96T12 slimline lamps and model 624-408 is for two 48T12 slimline lamps. Advantages claimed for the ballast include independent lamp operation, high starting current, low peak to root-mean-square current ratio and ventilated capacitor compartment for longer life. Made by **Sola Electric Co.**, Dept. 69-36-FL160, 4633 W. Sixteenth St., Chicago 50, Ill.

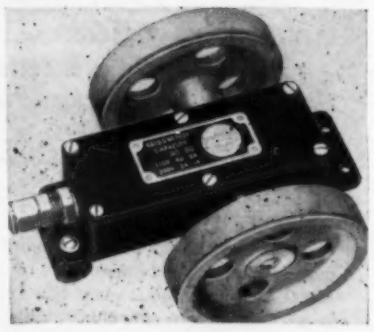
▲ For more details circle NED-668 on enclosed inquiry slip ▲

BIMETAL STRIP THERMOSTATS for differentials from 10 to 100° F

Sensitive, precise snap-action control characteristics are embodied in line of SA type bimetal strip thermostats. Applications include vaporizers, furnace fan controls, steam irons, sterilizers and other devices where long thermostat life is vital. Units are available in either adjustable or nonadjustable styles and in a manual-reset style. Furnished for either single-pole single-throw or for single-pole double-throw action, thermostats operate on differentials as low as 10° F or as high as 100° F. Contact pressure is positive until actual instant silver contacts snap open. Thermostats are rated 15 amp at 120-240 v ac and at 30 v dc. Made by **Stevens Mfg. Co.**, Dept. B, 69 S. Walnut St., Mansfield, O.

▲ For more details circle NED-669 on enclosed inquiry slip ▲

LINEAL METER for actuating electric counters



The 12-in. circumference of measuring wheels on this electric counter actuating switch permits its use for measuring paper, fabrics, lumber and other products. A bracket holds one end of the switch in a fixed position while the wheels ride on the material being measured. Each complete revolution closes and opens the switch, providing the impulse necessary to register a count in an electric counter. Other size wheels can be furnished. Switch has contact springs of nickel-silver with silver points and is rated at 10 amp, 115 v ac. Made by **Production Instrument Co.**, 700-12 W. Jackson Blvd., Chicago 6, Ill.

▲ For more details circle NED-670 on enclosed inquiry slip ▲

ENAMELSTRIP

STEEL · ALUMINUM · BRASS · PRE-FINISHED COLOR COIL

assures a perfect finish *before* fabricating

You can easily cut production time and cost with Enamelstrip, the continuous-feed, pre-colored metal coil. Leading manufacturers of metal products are using it with outstanding results in a wide variety of items. Enamelstrip's exclusive, flexible finish withstands the stresses of drawing, bending and forming without cracking or peeling. Many companies have entirely eliminated their finishing departments! Any metal in any finish will be coated and slit to your own specifications.

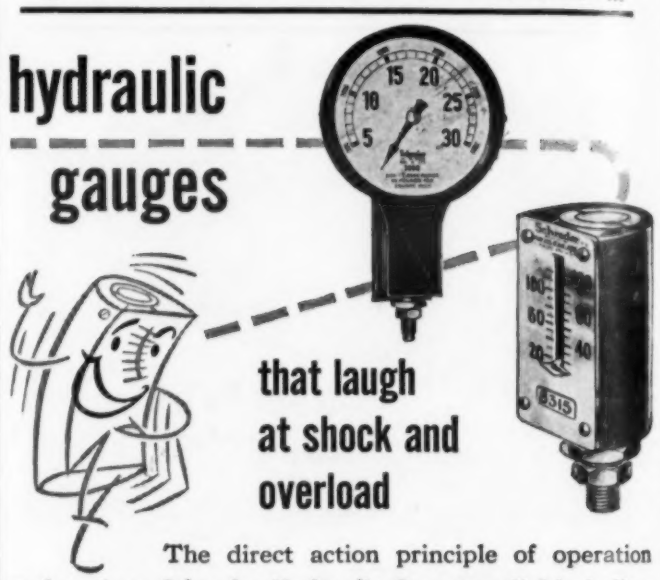
Write TODAY for detailed color bulletin.

THE COATED COIL CORPORATION

507 West 30th Street, New York 1 • LOngacre 5-3161

▲ For more details circle NED-671 on enclosed inquiry slip ▲

hydraulic gauges



that laugh at shock and overload

The direct action principle of operation makes these **Schrader Hydraulic Gauges** reliable indicators of pressure, even under shock and overload.

Easily installed, these gauges are also easy to maintain.

The Schrader catalog describes the full line of Schrader Hydraulic Pressure Gauges, as well as Schrader air line equipment. A copy is yours for the asking. Write for it today.

A. SCHRADER'S SON

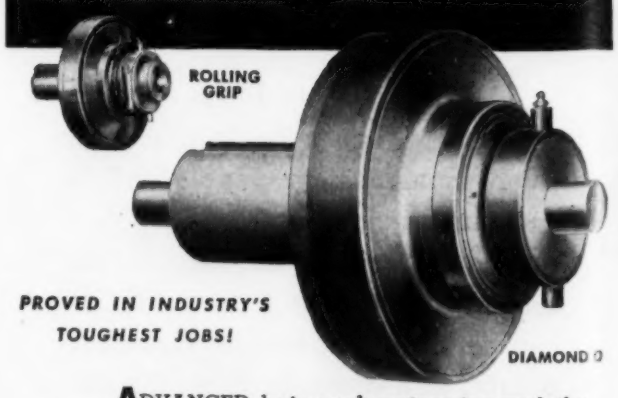
Division of Scovill Manufacturing Company, Incorporated

459 Vanderbilt Ave., Dept. E-31 Brooklyn 17, N. Y.

▲ For more details circle NED-672 on enclosed inquiry slip ▲

DODGE

FRICTION CLUTCHES



PROVED IN INDUSTRY'S TOUGHEST JOBS!

ADVANCED design and engineering mark the complete Dodge line of friction clutches, in a full range of sizes, with capacities from 1/3 hp. to 470 hp. Rolling Grip clutches have no toggles, combine ease of control with positive drive. Diamond D clutches, compact, fully enclosed, have stamina for grueling service. For detailed information write

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

DODGE

of Mishawaka, Ind.

▲ For more details circle NED-673 on enclosed inquiry slip ▲

Here's ONE Expense you CAN Cut 75%!

...It's the cost of keeping factories, warehouses, yards and parking areas swept. With 1 WILSHIRE Power Sweeper, you can sweep 6 to 38 times faster than by hand. Plenty of power to climb ramps. Pays for itself in as little as 15 weeks.

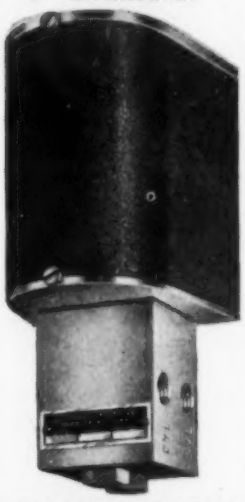
Write for the name of your nearest WILSHIRE Distributor who will gladly give you a Free Demonstration.

WILSHIRE POWER SWEEPER CO.
516 WEST CHEVY CHASE DRIVE • GLENDALE 4, CALIFORNIA
IN CANADA—PLANT MAINTENANCE EQUIPMENT CO.—VANCOUVER, TORONTO

▲ For more details circle NED-674 on enclosed inquiry slip ▲

4-WAY SOLENOID OPERATED AIR-VALVE only $32.50

For Fast Operation of Cylinders up to 3" Diameter



Compact sturdy construction, precision engineered for long, uninterrupted heavy duty operation.

Has small, well protected solenoid—operates small cylinders up to 3" dia. and larger cylinders where unusual speeds are not required.

Quantity and O.E.M. discounts. Write for description, discounts, etc.

IMMEDIATE DELIVERY

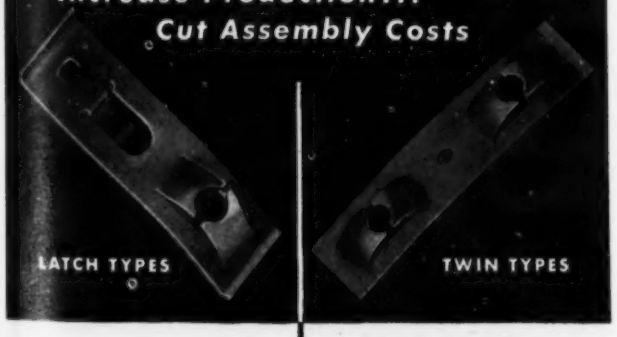
3-WAY VALVE
Same Design
only $19.80

AUTOMATIC VALVE CO.
37425 GRAND RIVER AVE., FARMINGTON, MICH.

▲ For more details circle NED-675 on enclosed inquiry slip ▲

TINNERMAN *Speed Nuts*

Increase Production... Cut Assembly Costs



Snap into Bolt Receiving Position; Eliminate Welding and Staking!

Combine 2 Fasteners in ONE; Eliminate tapped Plates!

For better fastening methods, do as thousands of industry's leaders have . . . turn to SPEED NUTS, "The Fastest Thing in Fastenings." Above are two of thousands of standard types available to reduce assembly time, cut material costs and save on materials-handling! See your TINNERMAN representative or write direct for details on our FREE Fastening Analysis service for your products!

TINNERMAN PRODUCTS, INC.
Dept. 12, Box 6688, Cleveland 1, Ohio

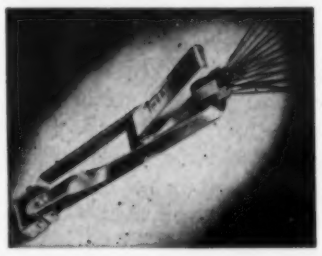
▲ For more details circle NED-676 on enclosed inquiry slip ▲

HAND TORCH
LP gas cylinder will heat 15 hours

Temperatures up to 2300°F are attained by this Bernz-O-Matic torch for heating, soldering, brazing and other operations. Compact enough to be carried in pocket, torch uses replaceable cylinder of liquefied petroleum gas which provides burning time of up to 15 hours. Flame is adjustable from pin-point to 8 in. Packaged unit consists of fully loaded cylinder and choice of utility or pencil type burner. Added accessories available are flame spreader and paint burner. Made by **Otto Bernz Co.**, Dept. N-1, 280 Lyell Ave., Rochester 6, N. Y.

▲ For more details circle NED-677 on enclosed inquiry slip ▲

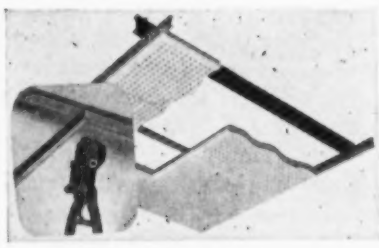
SPARK LIGHTER & TIP CLEANER
keeps welding torch clean



A handy tool which encourages welders to keep torches clean, Tip-O-Liters are combination of heavy duty three-flint spark lighter and tip cleaners. Tool has case of 12 Thermo Spiral tip cleaners attached directly to handle of lighter, making one handy unit. Cleaners' spiral type ribs eliminate frequent breakage and allow removal of carbon and slag without scratching or enlarging orifices of torch. Made by **Thermacote Co.**, Dept. E, 301 Mt. Pleasant, Newark, N. J.

▲ For more details circle NED-678 on enclosed inquiry slip ▲

METAL SUSPENSION SYSTEM
for acoustical tile ceiling



Any type acoustical ceiling material, including fiber board, mineral, glass fiber and cork, can be installed by means of this five-piece Acousti-Rail suspension system. The all-steel system, electrogalvanized to resist corrosion, is adaptable to variety of ceiling requirements, permitting use of 12 x 12, or 12 x 24-in. acoustical tile and 24 x 36, or 24 x 48-in insulation board. Outside flanges of tile rest on I-runner flanges, and a fiber spline is inserted into center kerf. A traverse T-spline inserted into exposed kerf of both tile also rests on the I-runner flange. Tile can be removed and replaced without disturbing installation. Made by **Mid-West Acoustical & Supply Co.**, 20002 W. Lake Rd., Cleveland 16, O.

▲ For more details circle NED-679 on enclosed inquiry slip ▲

Gasboy

"MILLION PROOF" CONSUMER ELECTRIC PUMPS

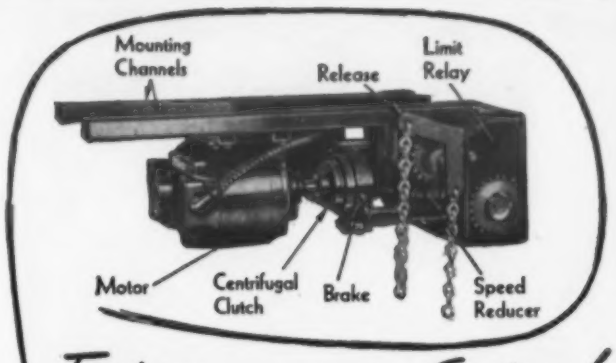
Rugged . . . dependable in every detail. Have been tested and retested under the most grueling conditions . . . in the lab and in the field! Showed no appreciable wear after pumping 1,000,000 gallons! That's why we call them "Million Proof" . . . . why they'll give you years of economical, trouble-free service. Model 1550 illustrated.

- Underwriters approved
- 10-12 G.P.M. speed
- 20 gal. set-back register with 99,999 totalizer

WRITE FOR COMPLETE INFORMATION AND PRICES

WM. M. WILSON'S SONS, INC.
MANUFACTURERS OF GASBOYS, KERO-BOYS, OILBOYS, ROTABOYS
GENERAL OFFICES AND PLANT AT LANSDALE, PA

▲ For more details circle NED-680 on enclosed inquiry slip ▲



Features THAT MEAN *Savings!*

From the mechanical features marked above, you will gain substantial economies in door operation — because they provide accurate door travel, smooth starting and stopping, ruggedness and long life in the Operator, and minimum maintenance. With these savings, plus employee time and heat savings, your Barcol Electric Door Operator can PAY FOR ITSELF quickly.

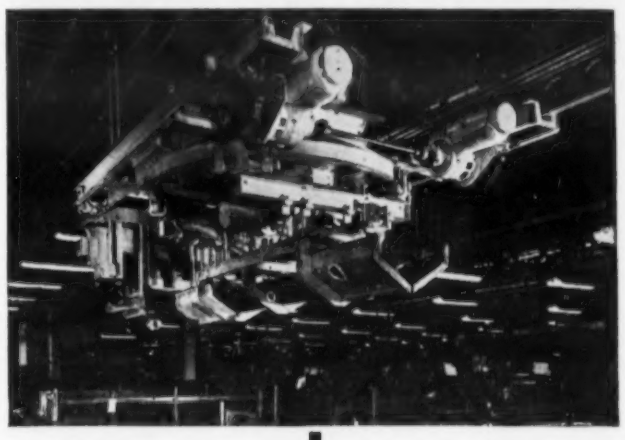
BARCOL ELECTRIC DOOR OPERATORS

Factory-Trained Sales and Service Representatives in Principal Cities

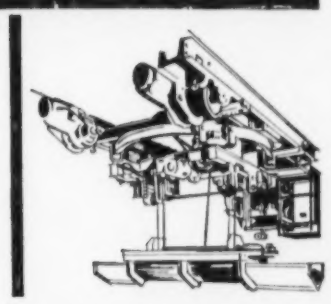
BARBER-COLMAN COMPANY
108 MILL STREET, ROCKFORD, ILLINOIS

▲ For more details circle NED-681 on enclosed inquiry slip ▲

INCREASES FLOOR CAPACITY 50%



OVERHEAD MONORAIL SYSTEM PERMITS INSTALLATION OF 50% MORE SCREW MACHINES —WITHOUT EXTRA BUILDING



A large manufacturer of farm implements solved "expansion pains" in the automatic machine department by installing a Louden Monorail System to handle bar stock.

In addition to increasing by 50% the number of machines in the same floor area, the labor force in this department was cut from 9 men to three men.

"Down time" from shortage of raw stock has been virtually eliminated, since the carrier cab is in continuous telephone contact with a dispatcher, who directs the supply of bars to machines.

All functions are motor driven and controlled from the cab. The hoist can be rotated 90° to permit accurate positioning of the stock in the machine racks.

FREE ILLUSTRATED BOOK

Case histories telling how Louden Monorail Systems have saved time and money for widely different kinds of industries are described and pictured in a new book called, "Economical Material Handling". Write for your copy.

THE LOUDEN MACHINERY COMPANY
7121 S. Superior Ave., Fairfield, Iowa

Louden

OVERHEAD MATERIAL HANDLING

▲ For more details circle NED-682 on enclosed inquiry slip ▲

42 STOCK SIZES

SOLID STEEL COLLARS

Precision machined for shafts from 3/16" to 3" diameter inclusive. Fitted with the famous self-locking UNBRAKO Socket Set Screw—the screw that positively won't work loose. Write for descriptive literature and the name of your local distributor. STANDARD PRESSED STEEL CO., Jenkintown 24, Pennsylvania.

HALLOWELL POWER TRANSMISSION DIVISION

SPS

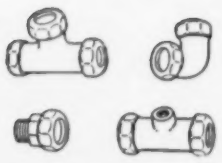
JENKINTOWN PENNSYLVANIA

▲ For more details circle NED-683 on enclosed inquiry slip ▲

plain-end pipe *Joined* in 30 seconds

A permanent, "Flexible-Tight" joint in just 30 seconds. No threading, no exact pipe fitting or alignment necessary. Resilient rubber gaskets in the Dresser Style 65 give you permanent protection against vibration, normal expansion and contraction stresses that spring leaks in other joints.

Sizes 3/8" to 2". Write for catalog.



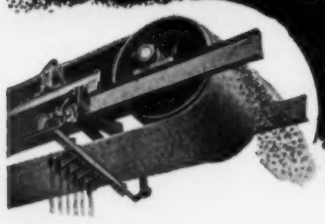
Complete line of couplings, ells, tees, etc. available.

DRESSER "NO-THREAD" FITTINGS

Dresser Mfg. Div., 59 Fisher Ave., Bradford, Pa. (One of the Dresser Industries). Warehouses: 1121 Rothwell St., Houston, Tex.; 101 S. Bayshore Highway, S. San Francisco, Calif. — Sales Offices: New York, Philadelphia, Chicago, Houston, South San Francisco — In Canada: 629 Adelaide St., W., Toronto.

▲ For more details circle NED-684 on enclosed inquiry slip ▲

Clean CONVEYOR BELTS *Last far Longer!* INSTALL S-A



Multiple Blades Keep Belt Clean and Dry

SPRING-TYPE CONVEYOR BELT CLEANER

• Removes wet or dry material from belts before they can be ground into belt by return pulleys and idlers. Adjustable to fit any conveyor. No moving parts, no power required. Easily installed by your own plant personnel. *Cost little, saves a lot!*

MAIL COUPON FOR FULL DETAILS

STEPHENS-ADAMSON MFG. CO. (S-A)
Standard Products Division
12 Ridgeway Ave., Aurora, Ill.
Please send me Bulletin 651 on Conveyor Belt Cleaners.
Name_____
Company_____
Address_____
City_____ Zone____ State____

▲ For more details circle NED-685 on enclosed inquiry slip ▲

New Processes and Materials

PLASTIC PROTECTIVE COATINGS
heat-hardening and cold-setting types

Designed to protect equipment against extremely corrosive conditions in all types of industries, Rickwilite phenolic resin coatings provide tough impervious film which is resistant to attack by corrosive acids and alkalies, salt water, vapors and weathering. It can be applied to metals, concrete, wood, plaster and other surfaces by brush or spray.

Type 1060 is baking or heat-hardening type. When baked at 350 to 400° F, coating hardens or polymerizes to form a chemically inert, insoluble finish that is glass-like in appearance, yet is flexible and elastic. Application and baking service is available.

Type 7100 is cold-setting and cures at room temperature by addition of catalyst just prior to application. Made by **Ric-wiL Plastic Coating & Mfg. Corp.**, 1290 Euclid Ave., Cleveland 15, O.

▲ For more dettails circle NED-686 on enclosed inquiry slip ▲

PROTECTIVE COATINGS
for textiles, roofs and metals

Originally developed to preserve fishing nets, No-D.K. preservative can be used on canvas, rope or any other fabric for protection against weather, alkalies, abrasion, acids and rot. Used as dip, it is easily applied and can be supplied in 1, 5 and 55-gal containers.

Texasphaltic rustproof metallic paint is usable on all exposed metal surfaces. It provides protective coating that is unaffected by any climatic condition. It will not crack, scale, blister or peel and is applied without priming.

Made of prepared asphaltums, Texasphaltic waterproof plastic cement is designed for waterproofing and preserves joints, bulkheads and other marine or land type wooden joints or structures. It can be used also for roof repairs and as caulking. It remains elastic and is unaffected by sunlight. Made by **Texasphaltic Co.**, 2038 Abundance St., New Orleans, La.

▲ For more details circle NED-687 on enclosed inquiry slip ▲

PLASTIC-BASE ADHESIVE
now available in 3-oz tubes

Providing more universal application, convenient 3-oz tubes of Rez-N-Glue have long narrow tip so that production line workers can easily apply this transparent cement to small, depressed or hard-to-reach areas. Air-tight screw-eye closure assures indefinite shelf life. This plastics-joining cement contains 50 per cent vinyl solids, remains flexible and has mild solvents that will not affect thinnest of plastics. Made by **Schwartz Chemical Co.**, 326-8 W. 70th St., New York 23, N. Y.

▲ For more details circle NED-688 on enclosed inquiry slip ▲

NARROW SAW BAND
offered in seven standard widths

Hard teeth which extend cutting life and retention of set are features of Claw Tooth narrow width saw band for cutting fibrous materials, plastics and nonferrous metals. Available in seven standard widths from 1/4 to 1 1/2 in., saws have pitches of 2, 3, 4 and 6 depending upon width. It is supplied in 100 and 500-ft lengths in convenient "Strip-out" containers, or in cut and welded lengths for immediate use on band sawing machines. Hooked tooth "pulls" into material to insure free-cutting action with minimum of fed pressure. Made by **DoALL Co.**, 256 N. Laurel Ave., Des Plaines, Ill.

▲ For more details circle NED-689 on enclosed inquiry slip ▲

Read SPEED AVERAGES
Directly—No Calculations

Jagabi® Chronometer Speed Indicator holds its pointers at average speed (rpm or fpm) after 3 to 6 seconds contact with the shaft or surface under test. Simply remove instrument and read speed average—accurate to within 1/2 of 1%. Then push button to return hands to zero and start watch for next test. Ball bearing operation. No lubrication (except in Hi-Speed models). Sturdy, uniform diameter spindle eliminates breakage. Supplied in durable case with 2 rubber tips and a 6" circumference rubber tired wheel. Ranges 0-100 to 0-10,000 rpm . . . with Jagabi Hi-Speed Indicator capable of readings to 100,000 rpm. **BULLETIN 35 D.**

B-811

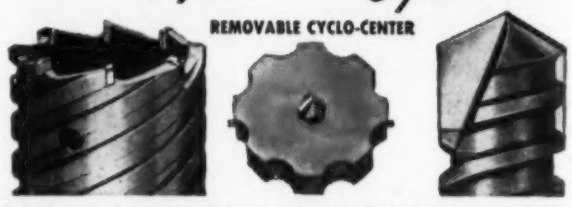
JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

▲ For more details circle NED-690 on enclosed inquiry slip ▲

No Packing! No Stalling!

Rotary drill masonry with carbide tipped *Cyclo-Core* or *Cyclo-twist*

REMOVABLE CYCLO-CENTER



Multiple spiral flutes, which run the full length of the shell, positively remove dust as it is pulverized. Removable Cyclo-Center for locating and starting holes. Recommended for hole sizes 1/4" to 6" diameter in hard concrete, using electric rotary drill and applying pressure. Extra shank lengths available—all diameters.

Twin spiral flutes remove dust speedily and surely. Carbide tip same diameter as body, no carbide hang-over—maximum strength. Recommended for hole sizes 3/16" to 1 1/2" in soft or medium masonry material, using an electric rotary drill, drill press or hand brace. Extra length bits available up to 36" long.

By the makers of Thunder-twist and Thunder-Core Hammer Bits. *Send for new Masonry Drill Bit Guide—Helps you choose the RIGHT bit for EACH job!*

New England Carbide TOOL CO., INC.
60 BROOKLINE STREET, CAMBRIDGE 39, MASS.

▲ For more details circle NED-691 on enclosed inquiry slip ▲

50 TONS OF POWER ...POSITIONED IN SECONDS!
It's a cinch with the new HEIN-WERNER model 50.12AA Hydraulic Jack

No "spotting" drudgery here! Sturdy positioning handles afford firm, secure grip . . . permit easy maneuverability. Handles fall flush against jack housing when not in use. This 50-ton HEIN-WERNER model is ideal for moving heavy machinery, bending pipe, pulling gears and pinions, and similar heavy duty jobs. It is powerful...safe... easy to use. Tandem pump speeds jacking . . . saves effort. See your industrial supply distributor or write us.

Hein-Werner HYDRAULIC JACKS

HEIN-WERNER CORPORATION • WAUKESHA • WISCONSIN

▲ For more details circle NED-692 on enclosed inquiry slip ▲

Speed Production...Save Money with

WEBBER

TRADE MARK REGISTERED

INDUSTRIAL FREEZERS

Webber Industrial Freezers can save you time and money on the following operations:

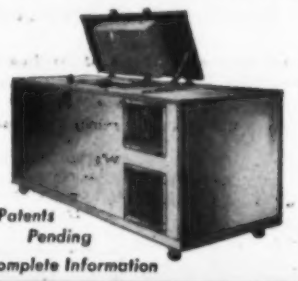
- In the Shrink Fit of Metals for Production and Assembly
- For Stabilization of Metals for Tool and Fixture Manufacturers
- For Metal Hardening—For greater tool life and accuracy
- For Storage and Testing of Materials at Extremely Low Temperatures
- For Chemical Curing, Ageing and Processing
- Eliminates Dry Ice Applications and Overhead
- Amortizes itself in less than one year
- Performs Low Temperature Services with Greater Dependability and Accuracy to Temperatures as Low as —165° below zero.

Cut your operating costs, Improve Quality and Production, Save Valuable Tools, and Improve Testing Methods with Webber Industrial Freezers

36 Standard Models . . . or Built to Your Specifications . . . at No Additional Cost.

A Freezer for Every Need

REPRESENTATIVES IN MOST CITIES



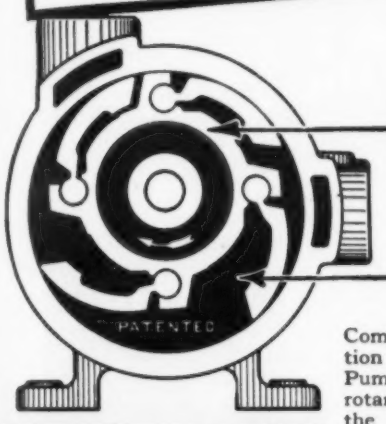
Patents Pending

Write for More Complete Information

INDUSTRIAL FREEZER DIVISION
WEBBER APPLIANCE CO., INC.
A-2740 MADISON AVENUE • INDIANAPOLIS 3, INDIANA

▲ For more details circle NED-693 on enclosed inquiry slip ▲

LEIMAN AIR PUMPS GIVE YOU *Greater Capacity!*



SMALLER PISTONS *provide* LARGER AIR SPACE

HINGED WINGS *take up their own wear*

Compare this cross-section of a Leiman Air Pump with any other rotary air pump. It is the working air space that counts—and Leiman provides 2 to 3 times more area, per size and weight of pump.

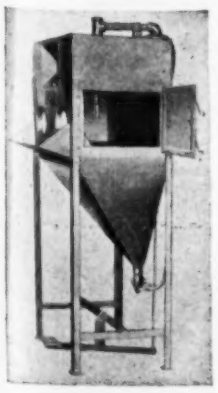
Handle air pressure, vacuum or suction jobs with much smaller Leiman Rotary Air Pumps. You save weight and space—run at lower r.p.m.—have fewer moving parts—no springs, gaskets or packings—no tips to renew—nothing to give trouble. Leiman patented leak-proof hinged wings maintain fully-rated pressure or vacuum for years and years.

What is your air application?

Send us details. Leiman engineers offer over 60 years' experience with thousands of air applications.

Catalog and Application Data sent on request. For Pumps—write DEPT. A

LEIMAN *Rotary* **AIR PUMPS** (Pressure—Vacuum)



Metal Cleaning and Finishing without acids or scratch brushes

Fast, low-cost, safe, uniform!

LEIMAN SANDBLASTS

Clean up scaly, rusty, rough surfaces—prepare better surface for plating, enameling or painting—stencil letters and designs—more rapid matte or satin finishes. Use unskilled help. Many models, treadle or automatic.

For Sandblasts—write DEPT. B

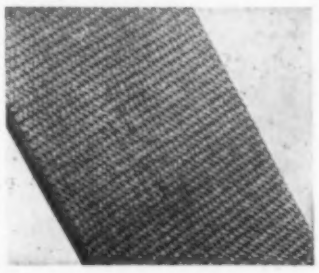
LEIMAN BROS., Inc. 167 Christie Street, Newark 5, N. J.

AIR PUMPS • AIR MOTORS • SAND BLASTS • DUST COLLECTORS

▲ For more details circle NED-694 on enclosed inquiry slip ▲

New Processes & Materials

CONVEYOR BELTING for steep incline service



Constructed with thousands of fingerlike rubber tentacles that grip slippery materials, Safety-Grip rough top conveyor belting can carry wax-surfaced cartons, ice, tin plate, glass and tile products up inclines as steep as 42 degrees without slipping. It flexes over minimum diameters smoothly and easily. Pulleys of 2 in. per ply are recommended, although smaller diameters can be used. Belting is constructed of three plys of duck with a minimum of 3/32-in. top cover thickness by friction bottom surface. It can be tailored to fit different materials handling requirements. Made by **Quaker Rubber Corp.**, 4905 Comly St., Philadelphia 24, Pa.

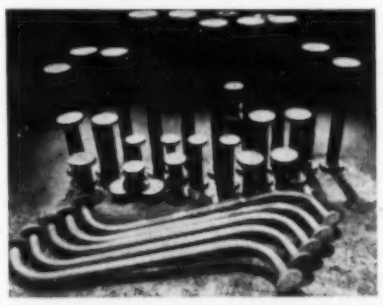
▲ For more details circle NED-695 on enclosed inquiry slip ▲

ALUMINUM-MAGNESIUM CLEANER usable in power washing equipment

Rapid cleaning of aluminum, anodized aluminum and magnesium parts in power washing equipment is possible with PWB No. 81 detergent. This water-soluble powder affords complete removal of all types of soil in one minute. It is nonfoaming, noncorrosive, stable and long lasting. Made by **Kelite Products, Inc.**, 1250 N. Main St., Los Angeles 12, Calif.

▲ For more details circle NED-696 on enclosed inquiry slip ▲

RUBBER PIPE LINING prevents failures in pipe bends

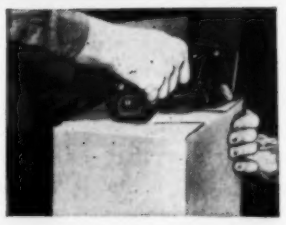


Developments in lining and covering pipe, fittings and process equipment with rubber make it possible to produce bends and complex shapes without risk of processing failure. Previously it was necessary to break a line for insertion of fittings to provide a change in flow, but process makes possible application of lining on three 90-degree bends in a single length of pipe as small as 4 in. diameter. Anti-oxidant lining resists corrosion, erosion and abrasion. The interior surface around bends is smooth and the bond between rubber and material is strong and resistant to aging. Made by **La Favorite Rubber Mfg. Co.**, 273 Wagaraw Rd., Hawthorne, N. J.

▲ For more details circle NED-697 on enclosed inquiry slip ▲

BOSTITCH P4 STAPLING PLIER WORKS WHERE OTHERS WON'T

Thin clinching blade → slips easily into tight places



In assembly operations . . . in sealing bags, cartons, corrugated wrappings . . . in making up containers . . . the Bostitch P4 Stapling Plier is a fast-fastening favorite. Loads quickly and easily . . . clinches staples securely with little effort . . . stands up under long, continuous use. Three models; for light, medium and heavy wires, with leg lengths from 5/32" to 9/16."

Write for Bulletin 222. Bostitch, 689 Mechanic Street, Westerly, R. I.

BOSTITCH®

Trademark "Bostitch" Registered U.S. Pat. Off., and Foreign Countries

AND FASTER fastens it better with wire

▲ For more details circle NED-698 on enclosed inquiry slip ▲

Sure, BOSTON REDUCTORS Cost More

LOOK WHAT YOU GET

worm gear of special, tough, low friction bronze — teeth cut for uniform load distribution and high efficiency.

worm of chrome moly steel with hardened, ground and polished threads.

housing of genuine Boston Gear iron, accurately machined to keep worm and gear in perfect alignment; heavy, solid, precision milled base.

Stocked by 75 Authorized Boston Gear Distributors — one near you.

WRITE FOR FREE COPY of Boston Gear Catalog No. 55

BOSTON GEAR WORKS
69 HAYWARD ST., QUINCY 71, MASS.

▲ For more details circle NED-699 on enclosed inquiry slip ▲

HEINEMANN Motor Controllers and Circuit Breakers

General Purpose

BETTER PROTECTION ...BETTER PROTECTED

Dust Tight

You can end motor and equipment burnouts now by the positive protection of the HEINEMANN hydraulic-magnetic operating principle. HEINEMANN Circuit Breakers are not affected by ambient temperature . . . do not require de-rating . . . eliminate nuisance tripping.

Enclosures are available for all types of industrial applications.

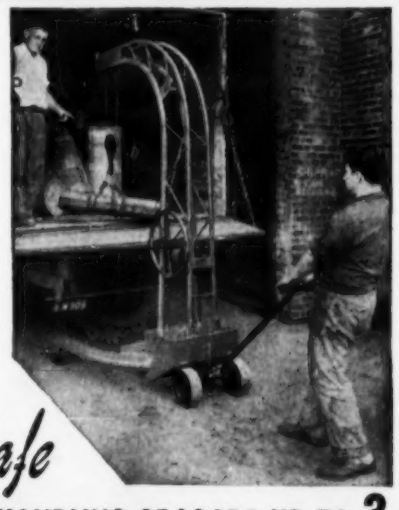
Weather Resistant

Send for Bulletin 1410

HEINEMANN ELECTRIC COMPANY
106 Plum Street Trenton 2, N.J.

Explosion-proof . . . Class 1, Group D.

▲ For more details circle NED-700 on enclosed inquiry slip ▲



Safe

EASY HANDLING OF LOADS UP TO 3 TONS!

Unloading covered trucks, like other tough jobs, is no problem for one man with a "CANTON" Portable Floor Crane. This lightweight, tubular welded steel crane is made in 8 sizes ranging from one to three ton capacity. Bulletin N-52 tells the story.

The **HILL ACME CO.**
"CANTON" DIVISION 1201 W. 65TH ST. CLEVELAND 2, OHIO

▲ For more details circle NED-701 on enclosed inquiry slip ▲

Impregnate PRESSURE CASTINGS Economically

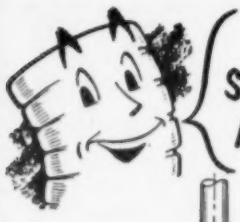
A positive, low-cost method of impregnating pressure castings to meet the most rigid specifications. Pressure castings impregnated with this equipment have been successfully subjected to severe tests with hot kerosene, hot oil, hot water and other solutions under pressure, with no evidence of porosity remaining.

Meets All Contract Specifications
If your contract calls for casting impregnation, get the facts on this MOGULLIZER packaged plant which utilizes both pressure and vacuum stages.

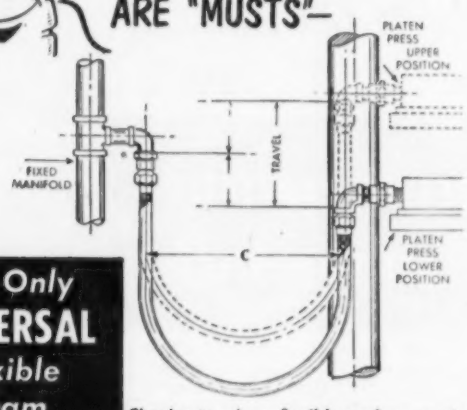
Write today for free literature and recommendations for your casting salvage problems.

NOTE: There are job shops in certain areas who can take care of your contract work. A few territories are still open for job shop installation. Write for set-up plan today.

METALLIZING CO. OF AMERICA
Dept. NED, 3520 W. Carroll Ave., Chicago 24, Ill., Telephone: SAcramento 2-3710
For more details circle NED-702 on enclosed inquiry slip



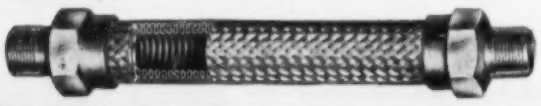
WHEN BOTH STEAM and MOTION ARE "MUSTS"—



Use Only UNIVERSAL Flexible Steam Connections

They're tough — flexible and economical. Widely used for movable platen presses, tire molds, laundry pressing machines and similar equipment requiring flexing many times per hour. Available in lengths to your specifications and equipped with heat-proof male and union female connectors as required.

Write for Catalog U-101 and data sheet showing proved method for installing Universal Seamless Flexible Metal Hose in vertical loops.



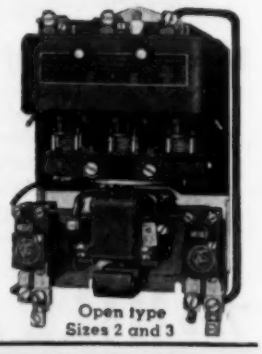
UNIVERSAL METAL HOSE CO.
2155 SOUTH KEDZIE AVENUE CHICAGO 23, ILLINOIS
For more details circle NED-703 on enclosed inquiry slip

CLARK type "CY"

AC MAGNETIC MOTOR STARTERS
now available in
DUST-TIGHT ENCLOSURES

The sensational new CLARK Type "CY" motor starters are offered in a wide variety of types and enclosures for use in such industrial atmospheres as hazardous gas, dust or excessive humidity. Illustrated is the NEMA Type V Dust-Tight, Fabricated Steel Enclosure —with gasket and wing nuts. This is available for sizes 0, 1 and 2.

CLARK Type "CY" starters, sizes 2 and 3, have an entirely new arc-quenching principle which greatly increases contact life, by a constant rotation of the arc on contact surfaces.

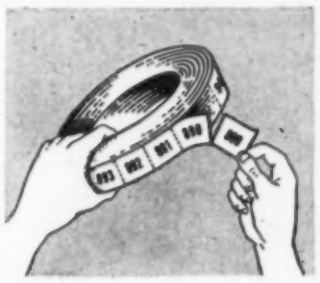

Open type Sizes 2 and 3

Write for descriptive literature.

THE CLARK CONTROLLER CO.
ENGINEERED ELECTRICAL CONTROL • 1146 EAST 152ND STREET, CLEVELAND 10, OHIO
For more details circle NED-704 on enclosed inquiry slip

New Processes & Materials

NUMBERED TAPE ROLLS
labels can be perforated



Consecutively numbered pressure sensitive tapes printed continuously for length of entire roll are production control aids for industry. Tapes are printed to customer specifications to include number and standard legend. Numbering can start at any given number and continue up through thousands. Special codes and repeats can also be accomplished. Labels can be perforated for use without dispenser. Offered by **York Tape Printers, Inc.,** 1951 Stanton St., York, Pa.

For more details circle NED-705 on enclosed inquiry slip

IMPRINTED CORRUGATED WRAP
provides economical packaging

By furnishing engravings to customers in three overall standard background patterns, Chippaprint Service makes possible low-cost personally-printed flexible corrugated wrap for packaging. Plate designs in adaptable patterns have openings at natural breaks. User's copy such as brand name, sales message and trade mark is imprinted in one, two or three colors in these spaces as an integral part of the pattern. There is little chance of duplication because hundreds of color combinations are possible.

Chippaprint Service also offers tape printed to match customer's corrugated wrap in ½ to 6-in. widths in any desired quantity from five rolls up. Service is available from **Chippewa Paper Products Co.,** 2427 S. Rockwell St., Chicago 8, Ill.

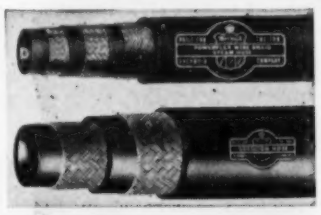
For more details circle NED-706 on enclosed inquiry slip

CEILING AIR DIFFUSING PANEL
works by pressure displacement

Heating and ventilating systems of duct or plenum type can use Modular Multi-Vent ceiling air diffusing panels which deliver air by pressure displacement instead of high velocity. Panels can be located anywhere in ceiling since no air movement in excess of ASHVE comfort zone requirements exists more than 6 in. from them. Assembly consists of lightweight 12 x 24-in. panel, adjustable orifice valve and flexible glass fiber tubing for connection to air supply. Panel fits into standard acoustical metal ceiling pan. Made by **Pyle-National Co.,** Multi-Vent Div., 1342 N. Kostner Ave., Chicago 51, Ill.

For more details circle NED-707 on enclosed inquiry slip

MOLDED RUBBER HOSE
five basic types are color coded according to type of application



Line of molded rubber hose made by this company has been consolidated into five basic types from the previous eighteen and each is color coded for identification according to use. Versaflex with a red cover is made with multiple braids of high tensile rayon yarn for pressures up to 800 psi. Oil resistant interior and exterior covers permit handling of butane, propane, petroleum products, water and air.

Brown covered Versicon, for pressures up to 300 psi, can be used for air operated tools, acetylene, water, greases, oils and gasoline. Aquair, with a green cover, is designed for conducting water, air, oxygen and acetylene at pressures to 200 psi. Black-covered utility, for pressures to 125 psi, is for handling water and air. Powerflex makes use of steel wire braids and asbestos braided yarn in handling superheated steam at pressures up to 200 psi. Made by **Thermoid Co.,** 311 Whitehead Rd., Trenton 6, N. J.

For more details circle NED-708 on enclosed inquiry slip

HAVE YOU TRIED THIS ONE FOR SIZE?

Small or Large—R P Paint Arrestors Economically Solve the Most Difficult Paint Over spray Problems

Here's another example of the flexibility of R P Paint Arrestors—a bench type booth for spraying small articles. This plant has six such units emptying into a common exhaust duct . . . a simple, effective installation at minimum cost.

WRITE FOR FREE BOOKLET
Helpful, informative suggestions to solve your paint spray booth problems. Write today.
RESEARCH PRODUCTS CORPORATION
Dept. N; Madison 10, Wis.

RP . . . PRODUCTS OF RESEARCH

For more details circle NED-709 on enclosed inquiry slip

SMALL PARTS USERS!

NEW FOLDER tells how you can CUT COSTS

SMALL ZINC DIE-CASTINGS
1000 per lb. to 3 per lb.

- High speed production
- Simple or Intricate Parts
- Save machining, assembly operations

made in **DOLLIN's** *Special* SMALL CASTINGS DEPARTMENT

It's FREE! Write to **DOLLIN CORPORATION** 612 So. 21st St., Irvington 11, N. J.

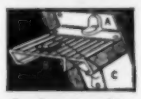
For more details circle NED-710 on enclosed inquiry slip

HERE'S DUO-SAFETY'S TWO-SIDED . . . ALL ALUMINUM MAINTENANCE LADDER

TYPE AL2C

Double Size Platform

Especially Sturdy Spreader


A. Angle Clip Brace.
B. Serrated, Reinforced Step.
C. Angle Brace.

A new ladder in the famous Duo-Safety line of strong, sturdy, aluminum industrial ladders. Has a double climbing side, large top platform, rubber safety boots, light, strong aluminum construction. Ideal for all types of overhead maintenance work including use with extension planks. Available in sizes from 3 to 16 feet and is collapsible for storage in a limited space.

Free, Colorful File Catalog . . . Sent on Request

DUO-SAFETY LADDER CORP.
811 NINTH ST. OSHKOSH, WIS.

For more details circle NED-711 on enclosed inquiry slip

MARKED in Aluminum Ink*

—ideal for dark metallic surfaces

Marking steel drums, tools, parts, pipes, etc. is smooth sailing with the Flo-master Felt-Tip Marker. It marks on any surface—glass, wood, plastic, etc.

*The complete range of ten colors in Flo-master Inks permits speedy and accurate identification for assembling, stocking, inspecting.

Flo-Master semi-opaque inks—waterproof, non-smudging, fast-drying—are recommended for hard-to-mark surfaces using the KING SIZE Flo-master (illustrated). For general purpose marking—cartons, cases, etc.—use Transparent Inks with POCKET SIZE Flo-master.

Contact your supplier or write direct to—
Cushman & Denison Manufacturing Co.,
153 West 23rd Street, New York 11.

Flo-master
FELT-TIP MARKER

For more details circle NED-712 on enclosed inquiry slip

SUNNEN® HONING MACHINES
"Accuracy at Low Cost"

Straighten Bores, Remove Burrs, Speed Production... in a Single Honing Operation

Heat Treat Distortion, burrs and scale, and out-of-roundness can all be quickly corrected with Sunnen Honing. This worm gear is typical.

PROBLEM: Straighten and clean up, and bring to final size this heat treated worm gear, in shortest possible time.

MATERIAL: 1118 Steel — HARDNESS: Rockwell 54-58 "C"
HOLE DIAMETER: .625" — TOLERANCE: .0005"
LENGTH: 1⅞"
KEYWAY: 3/16" wide, full length of bore — STOCK REMOVAL .0001"-.0005"

SOLUTION: Sunnen Model MBB-1290 Honing Machine, with Keyway type Honing Unit. Machine was installed and in operation in a little over a month after the original inquiry.

RESULTS: The smooth finish and accurate diameters produced by Sunnen Honing make perfect fits between the gears and shafts—assures quieter operation, longer life. Production rate, including gaging time, is 400 per hour.

Sunnen Honing is showing similar results on hundreds of different parts in leading plants across the country. It is accurate, easy to use, fast—often does the job when nothing else will. On short runs you can frequently complete the job in less time than it would take to set up for other methods. Average installation costs less than $1,000.

Send for NEW FREE BOOKLET—shows you many different ways Sunnen Honing is helping others—suggests ways it might be helpful in *your* plant.

SP-691-R

Let SUNNEN® HONING SOLVE YOUR HOLE PROBLEMS

SUNNEN PRODUCTS COMPANY.
7968 Manchester Ave., St. Louis 17, Mo.
Canadian Plant: Chatham, Ontario

For more details circle NED-713 on enclosed inquiry slip

New Processes & Materials

HEAT-REFLECTING ROOFING is aluminum-asbestos base coating

Combining heat reflective qualities of aluminum flakes with asbestos, asphalt and waterproofing oil vehicles, Asbestolite roof coating is reported to lower interior building temperatures 15 to 20° F during hot sunshiny days. Aluminum flakes form metallic shield which reflects sun's rays, seals out moisture and is impervious to rust, corrosion and fumes. Developed by **Monroe Co.**, Dept. M-1, 10703 Quebec Ave., Cleveland 6, O.

For more details circle NED-714 on enclosed inquiry slip

SYNTHETIC RUBBER withstands high temperatures

Developed for use with synthetic lubricants at high temperatures, synthetic rubber compound 56243 meets specifications Mil-R-7362. It can be furnished in molded and extruded shapes, lathe cut, and in washer and die-cut parts. Samples and evaluation sheets are offered by **Western Felt Works**, 4117 Ogden Ave., Chicago 23, Ill.

For more details circle NED-715 on enclosed inquiry slip

ADHESIVE FILM for laminating and holding jobs bonds at 300 to 350° F

Developed for industrial splicing, laminating and holding jobs, Scotch-Weld bonding film No. 588 is a heat-activated film made from a combination of plastics. Under heat it changes from a solid to a heavy liquid that flows and bonds surfaces together. Potential applications include bonding phenolic resin tabletops to plywood bases, cellulose sponge mops to metal backing plates, honing stones to mandrels, and other metal, cloth, wood, glass and paper materials.

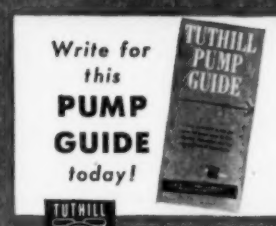
Bonding requires a 300 to 350° F temperature and 15 to 50 psi, plus 1 to 30-minute curing time range, all depending upon materials being joined and degree of bond strength required. Film is yellow, 6 mils thick and offered in ¼ to 20-in. widths on 36-yd rolls. Sample ¾-in. by 3-yd rolls are available from **Minnesota Mining & Mfg. Co.**, Dept. NED, 900 Fauquier St., St. Paul 6, Minn.

For more details circle NED-716 on enclosed inquiry slip

HOW TO PICK THE RIGHT PUMP FOR YOUR PURPOSE

Tuthill now makes it easy for you to select the pump best-suited to the service you require. In one simple, letterhead-size table, the Tuthill Pump Guide gives you the details you need—types of service, pump models for each, capacities, pressures, speeds, packing, mountings, and exclusive features. Saves time, work and trouble.

Write for this PUMP GUIDE today!



TUTHILL PUMP COMPANY
939 East 95th Street, Chicago 19, Illinois

For more details circle NED-717 on enclosed inquiry slip

HERE'S THE TEAMMATE FOR YOUR LATHE

Get fast, convenient grinding of lathe centers, cutters, reamers, rolls and dies. You can do it with THE CINCINNATI Ball Bearing Tool Post Grinder!

THE CINCINNATI mounts on the compound rest of any lathe with a 9" swing, or larger. It grinds within 2½" of the maximum swing . . . can be swivelled around the clamping bolt . . . spindle height is readily changed. Motor mount is adjustable for easy maintenance of belt tension. Write today! Ask for name of your distributor or Bulletin 52-YD.

THE BEST IN DRILLS, GRINDERS, BUFFERS, PORTABLE TOOLS

TRADE The Cincinnati MARK

50th Anniversary

THE CINCINNATI ELECTRICAL TOOL CO.
Division of THE R. K. LeBLOND MACHINE TOOL CO.
CINCINNATI 8, OHIO

For more details circle NED-718 on enclosed inquiry slip

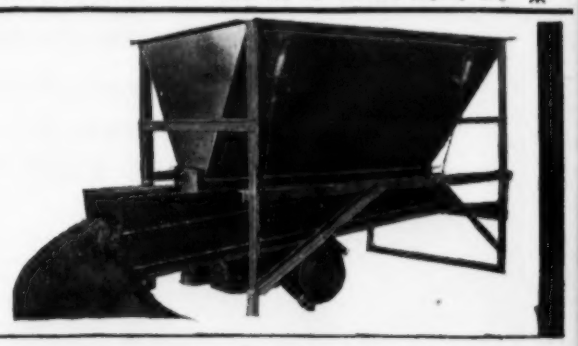
It's NEW!

It's FAST! TOLEDO® SPEEDWEIGH OVER-UNDER SCALES

Here's *new speed with accuracy* for you in check weighing, packaging, many other operations today . . . 3 sizes—to 5 lb., to 20 lb., to 50 lb.! Shadowfree wide-angle reading . . . accurate to 1/64 of an ounce . . . new improved knife-edge check link system . . . *exclusive* "coined" bearings for greater accuracy, longer life . . . stainless steel beam . . . enclosed levers in one-piece housing . . . choice of platters and scoops . . . many more *plus* features! Write for bulletin 1416. Toledo Scale Company, Toledo 1, Ohio.

TOLEDO® Headquarters for SCALES

For more details circle NED-719 on enclosed inquiry slip



If you use bin-stored materials you can handle them better with a Simplicity Os-A-Veyor type bin feeder

If you move anything that can be stored in a bin, chances are a Simplicity Os-A-Veyor type bin feeder will cut handling costs and speed up your operations. Simplicity Bin Feeders practically eliminate bridging and stoppage because they feed from the full length of the bin—materials will flow as you need them. Simplicity bin feeders are ideal, too, for storing and moving materials that are improved by tempering. Simplified power and operating mechanism keeps maintenance costs low, makes servicing easy. Write us today for complete information.

Simplicity ENGINEERING CO., DURAND, MICH. 101

For more details circle NED-720 on enclosed inquiry slip

INSULATION STAYS PUT
on T & B Sta-Kon® Self-Insulated Terminals*

Nylon insulation on these new T & B Sta-Kon Self-Insulated Terminals is anchored by flaring of terminal barrel — and staking operation keys it in place to *stay*.

These new components end the risk of shorts between closely-mounted terminals. Insulation prevents metal-to-metal contact — withstands attack by gasoline, naphtha, hydraulic fluids. Shipped in one piece, assembled in one operation — with SHURE-STAKE Hand or Power Tools.

Engineered Right—Distributed Right. Sta-Kon Self-Insulated Terminals are typical of all T & B quality fittings designed for lowest installed costs. Furnished 100% through T & B distributors under the T & B Plan.

*Patent Pending

THE THOMAS & BETTS CO.
INCORPORATED
24 BUTLER STREET, ELIZABETH 1, NEW JERSEY
Manufacturers of Electrical Fittings since 1898
Originators of self-insulated solderless terminals in 1935

▲ For more details circle NED-721 on enclosed inquiry slip ▲

Use ARCOS Stainless Electrodes

Dependable weld performance on stainless fabrication requires weld metal with the correct chemical composition.

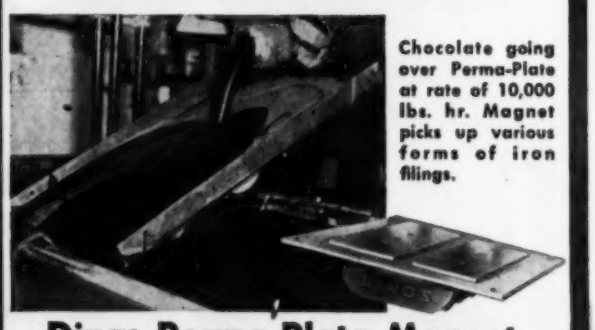
The Arcos quality controls give you this assurance with every lot of Stainless Electrodes you receive. From the chemical analysis of the raw materials, to the analysis of actual weld metal, every control test is applied to assure you chemically correct weld metal at all times. In your own plant that can mean improved welding performance . . . fewer rejects . . . lower weld costs.

New chart of typical weld metal analysis tells what Arcos electrodes deliver. Copy on request. Arcos Corporation • 1500 South 50th Street • Philadelphia 43, Penna.

WELD WITH ARCOS
Stainless, Low Hydrogen and Non-Ferrous Electrodes

▲ For more details circle NED-722 on enclosed inquiry slip ▲

Here's Magnetic Protection Against Tramp Iron At LOWEST POSSIBLE COST!



Chocolate going over Perma-Plate at rate of 10,000 lbs. hr. Magnet picks up various forms of iron filings.

Dings Perma-Plate Magnet
NON-ELECTRIC • PERMANENT • LIGHTWEIGHT

ABOLISH tramp iron threats to your machinery. Gain constant, permanent protection at low cost. The Dings Perma-Plate requires no electricity—no electrical accessories—no maintenance.

Easily installed in chutes, ducts, trays, spouts, over conveyor belts, etc., the powerful Perma-Plate gives you *maximum* tramp iron removal—gives you CERTIFIED magnetic strength, GUARANTEED magnetic permanence. Learn the details—SEND for BULLETIN.

DINGS MAGNETIC SEPARATOR COMPANY
4758 W. Electric Ave., Milwaukee, Wis.
All Types of Electric and Non-Electric Magnetic Separators for Every Purpose.

Dings Certified MAGNETIC STRENGTH

▲ For more details circle NED-723 on enclosed inquiry slip ▲

New Processes & Materials

LAMINATED PLASTIC TUBING is moisture-resistant machining grade

Developed for textile applications, this special moisture-resistant machining grade Textolite laminated plastic tubing is being used for manufacture of sizing cylinders. Cylinders also have high acid and caustic resistance and are being used to handle nylon and silk. Light tan in color, plastic will not color bleed. Cylinders are 7 in. long, have 5⅝-in. ID and wall thickness of ¼-in. Smooth finish is obtained by sanding and buffing. Tubing made by **General Electric Co.**, Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

▲ For more details circle NED-724 on enclosed inquiry slip ▲

HONING COOLANT has cleansing and antirust qualities

Water soluble honing coolant designated as No. 560 combines heat dissipating qualities of water with cleansing and antirust qualities of kerosene. Coolant contains high percentage of liquid detergent, an extreme pressure agent, a rust preventive and is non-inflammable and nonvolatile. It is used in concentrations of 15-20:1, depending on individual requirements. Tests with coolant resulted in cool stock at all times, no vaporization, bores within 0.0002-in. out-of-round and taper limits, no rejects on 41 separate cylinder blocks honed, free stock removal throughout, no 'loading' of hones, hone breakdown of only 0.0002-in. for each 0.002-in. of stock removed and no rust formation on machine or motor blocks. Developed by **Pelron Corp.**, 3463 W. 47th St., Lyons, Ill.

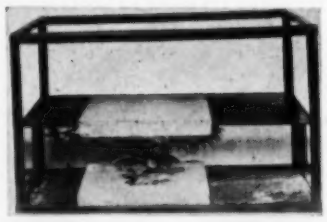
▲ For more details circle NED-725 on enclosed inquiry slip ▲

UNBREAKABLE PLASTIC MIRRORS for many industrial applications

Constructed of clear Homalite CR-39 thermosetting plastic, unbreakable industrial mirrors are also resistant to chemical attack, withstand heat and abrasion, and are light in weight. Mirror is available in 1/16, 3/32, ⅛, 3/16, ¼ and ½-in. thicknesses in sheets measuring up to 28 x 50 in. It can be machined accurately to user's specifications before or after mirroring. Free sample is offered by **Flexmir Metallizing Co.**, 22 Broome St., Newark 3, N. J.

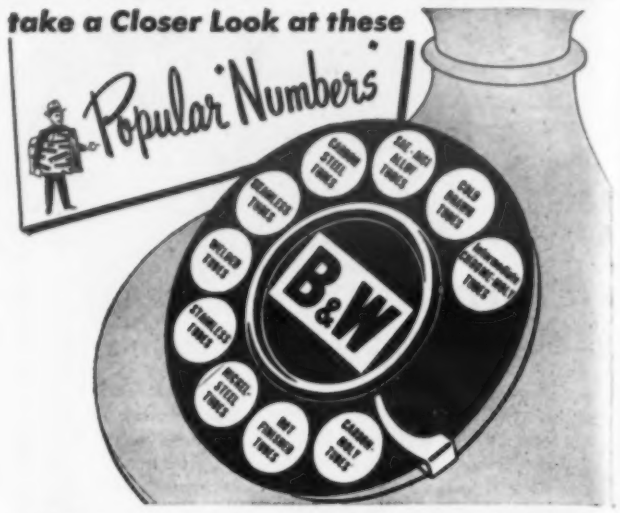
▲ For more details circle NED-726 on enclosed inquiry slip ▲

CONCRETE WATERPROOFER for use with portland cement mixes



Lightweight insulating aggregates used in roof decks, walls, ceilings and floors can be rendered waterproof and given improved insulating properties by addition of Fluresit cement waterproofing powder. Damp or water-logged concrete, a conductor of heat through its "wicking" action, is prevented by adding this material to any portland cement mix. Floor slabs integrally waterproofed with the powder do away with loosening or buckling of asphalt tile or linoleum or saponification, blistering or peeling of paints. Photo shows comparative slabs of identical mixes of cement and lightweight aggregate, with floating slab containing 6 lb of Fluresit per sack of cement. Made by **American Fluresit Co.**, 4013 Red Bank Rd., Cincinnati 27, O.

▲ For more details circle NED-727 on enclosed inquiry slip ▲



Keep your vendor files up-to-date by writing for Bulletin TA-1559 to match B&W tubing facts to your requirements. To save your time, and to keep paper work at a minimum, call in Mr. Tubes — your B&W Tube Representative — to give you and your company engineers the benefit of the extensive technical service on pressure and mechanical tubing he represents.

TA-1692G

THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION
General Offices & Plants
Beaver Falls, Pa.—Seamless Tubing; Welded Stainless Steel Tubing
Alliance, Ohio—Welded Carbon Steel Tubing

B&W STAINLESS and WELDED TUBES

▲ For more details circle NED-728 on enclosed inquiry slip ▲

and discovered he had saved $$ THOUSANDS through:

1. INCREASED PLANT CAPACITY
2. BETTER QUALITY
3. FUEL SAVINGS

"We never realized how much could be obtained with a mere improvement in steam trapping. It's like a man with dirty eye-glasses — he thinks he's seeing perfectly until he cleans them and finds out how much he has missed.

"We installed 71 Armstrong traps (one on each steam consuming unit) at a cost of about $550. The greater heat in all units showed up in a big production increase and improved quality due to better temperature control. Of course, fuel savings resulted from the more efficient use of steam."

He's* enthusiastic about ARMSTRONG'S. Why not? He found he revitalized his whole plant. It won't hurt to check your own eye-glasses. If there's any doubt, it could pay big dividends to talk it over with your nearby Armstrong Representative.

*name on request

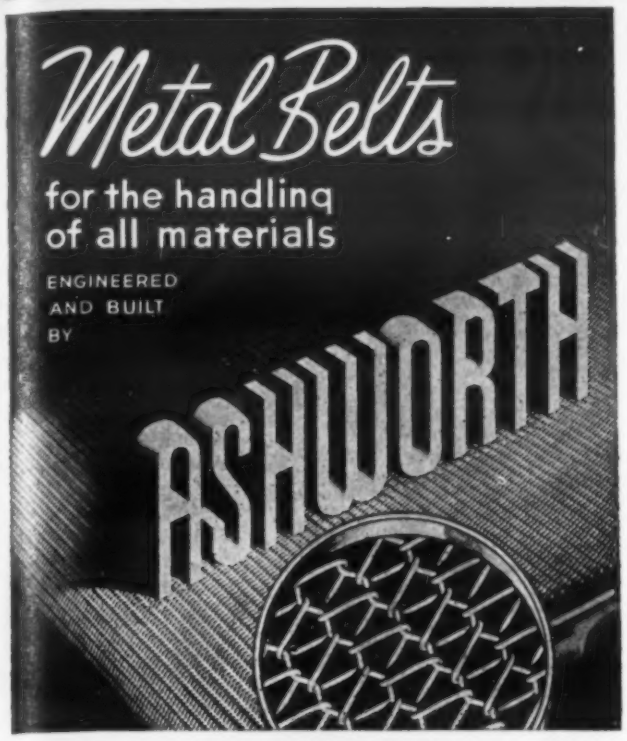
HERE'S A GUIDE TO BETTER TRAPPING

SEND FOR THE 36 PAGE STEAM TRAP BOOK

ARMSTRONG MACHINE WORKS
819 Maple Street, Three Rivers, Mich.

ARMSTRONG STEAM TRAPS

▲ For more details circle NED-729 on enclosed inquiry slip ▲



WRITE FOR ILLUSTRATED CATALOG 52D

ASHWORTH BROS., INC.
METAL PRODUCTS DIV. • WORCESTER, MASS.

Sales Engineers located in Buffalo • Chattanooga • Chicago • Cleveland • Detroit • Los Angeles • New York • Philadelphia • Pittsburgh • Seattle
Canadian Rep., PECKOVER'S LTD. - Toronto - Montreal

▲ For more details circle NED-730 on enclosed inquiry slip ▲

BAKER 4-PURPOSE CARRIAGE
Makes a Fork Truck do more work

Hydraulically operated attachment for Baker Fork Trucks, providing:

1 STANDARD FORKS
2 CLAMP
3 FORK SPACER
4 SIDE SHIFTER

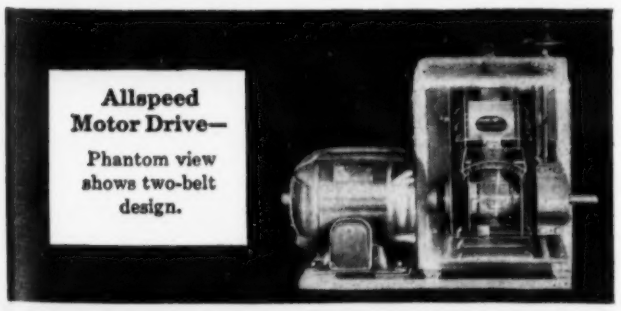
● With this special lift carriage assembly, in place of a regular fork lift carriage, any standard Baker 2000 to 4000-lb. Fork Truck becomes a multi-purpose handling machine. From one adjustment it functions as a *standard fork truck* for pallet and ordinary fork truck handling, as a *clamp truck* for handling drums, cartons, skid boxes, etc., and as a *fork-spacer*, permitting the handling of varying widths of pallets, skids or other loads. A simple change in the adjustment converts it into a *side-shifting fork truck* which speeds many carloading and storing operations by making it easier to line up loads in close quarters. Lateral movement of forks in each case is operator-controlled by a lever conveniently located on the dash. Action is hydraulic, with roller conveyor chain linkage.

For complete information ask for BULLETIN 1350-1

THE BAKER-RAULANG CO.
1245 WEST 80th STREET, CLEVELAND 2, OHIO

Baker INDUSTRIAL TRUCKS

▲ For more details circle NED-731 on enclosed inquiry slip ▲



Why 2 belts instead of one on ALLSPEED MOTOR DRIVES?

This is an easy one:
Less space, because of compact design. Available in upright or horizontal models, with output on right or left hand side . . . *Longer life*, because belts are narrower, wear better . . . *Easier replacement*—no dismantling to change belts.

Other features you'll like: Automatic positive belt tensioning . . . Bronze bushings on all wearing parts . . . Can be run in either direction . . . Mounted in any position . . . Shielded and life lubricated ball bearings . . . Uses standard foot mounted motors.

Sizes from ⅓ to 7½ hp; up to 16-1 range of variation. Units available without motors.

Write for Bulletin AS-1600-B6. Worthington Corporation, Allspeed Drive Division, Holyoke, Mass. AS.2.6

WORTHINGTON
Allspeed Drives

▲ For more details circle NED-732 on enclosed inquiry slip ▲

New Processes & Materials

ROSIN-COATED STAPLES
afford firm grip of material

Rosin coating on Duo-Fast staples assures high holding power in all types of materials. Grip is reported to be double that of plain staples. Sizes are available for most stapling requirements. Made by **Fastener Corp.**, 876 Fletcher St., Chicago 14, Ill.

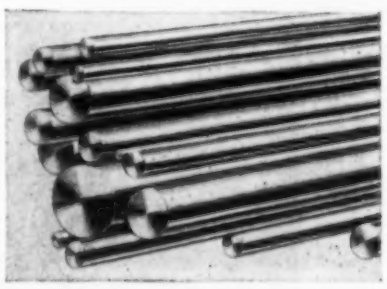
▲ For more details circle NED-733 on enclosed inquiry slip ▲

IMPERMEABLE SHEETING
center is woven spun glass ply

Consisting of synthetic rubber and asphaltic hydrocarbons built around a ply of woven spun glass, Nerva-Clad impermeable sheeting is designed for protection of structural steel, reinforced concrete, tanks, tunnels and pipelines. Sheeting resists moisture, oxidation, corrosion and will not lose its impermeability by cracking at freezing temperatures or softening in summertime. Tensile strength of 1-in. wide strip of glass fabric center is 80 lb lengthwise and 60 lb crosswise. Flexible and resilient, sheeting can be applied to wall with hot asphalt or cold vibrated mastics. These can also be used for lap-sealing and spot bonding in case of spandrel beam waterproofing. Made by **Rubber & Plastics Compound Co.**, Room 1519, 46 W. 50th St., New York 20, N. Y.

▲ For more details circle NED-734 on enclosed inquiry slip ▲

LEAD-BEARING STEELS
available in various size ranges



Two lead-bearing steels, available cold drawn in various size ranges, are offered in rounds and hexagons. Super La-Led, available in limited quantities, is free machining open hearth steel containing ¼-per cent lead and almost ½-per cent sulphur. Tests show it machines 80 per cent faster than B1113. It is recommended for applications where advantage can be taken of its good cutting speed. Leaded TS 4140 Modified is lead-bearing alloy that machines one-third faster than the comparable nonleaded grade. Heat treating characteristics, hardenability and mechanical properties are not appreciably affected by addition of lead. Made by **La Salle Steel Co.**, 1424 150th St., Hammond, Ind.

▲ For more details circle NED-735 on enclosed inquiry slip ▲

You can provide easy mobility to a variety of industrial products with

IRONBOUND ALL-PURPOSE HANDLING UNITS . . .

POPULAR IRONBOUND FLO TRUK

● An easy to handle ruggedly constructed unit for carrying bulky and heavy loads at lowest cost. Seven standard sizes with one or two push handles makes it easy to select the proper truck for your requirements. Ask an Ironbound engineer for suggestions.

The HANDY for furniture and similar items.
The HAULER for cases, crates, tote boxes, etc.
The HUSKY for general use throughout the plant.

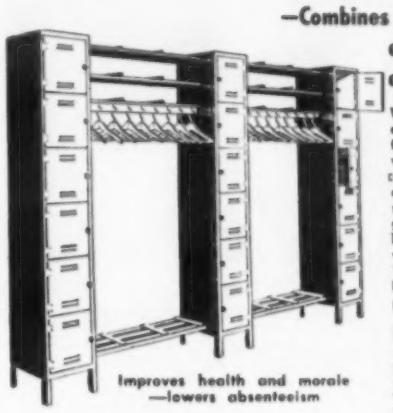
THE IRONBOUND "SAFETY-SKID" WITH ROUND CORNERS
Ironbound construction assures long hard use with complete safety to product and operator. Still the time proven method for handling of materials efficiently and economically.

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

▲ For more details circle NED-736 on enclosed inquiry slip ▲

VALET RACKS



LOCKERETTE
—Combines the best features of both lockers and coat racks

Wraps are exposed to air and light. Employees do not face the weather in damp wraps that have been crumpled in dark lockers—do not eat soggy lunches, soaked by wet hats or gloves. Each person has his own spaced coat hanger, ventilated hat shelf and 12" x 12" x 15" deep lock box for lunches, tools and personal effects.

Lockerettes save space too . . . the No. 6-12 (2-column) accommodates 12 people in 6 ft; the No. 9-18 (illustrated) accommodates 18 in 9 feet.

Improves health and morale —lowers absenteeism

Write for Bulletin No. OL 8

VOGEL - PETERSON CO.
624 So. Michigan Ave., Chicago 5, Ill.

▲ For more details circle NED-737 on enclosed inquiry slip ▲

SUB-MINIATURE PILOT LIGHTS
Approved for AIRCRAFT
AND IMPROVED IN IMPORTANT DETAILS

DIALCO

A great aid to your miniaturization program

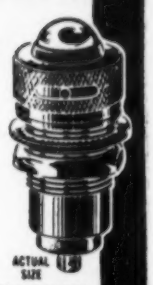
SUB-MINIATURE INDICATOR ASSEMBLIES

NON-DIMMING
No. 8-1930-621

MOUNT IN 15/32" HOLE
ALL LENS COLORS

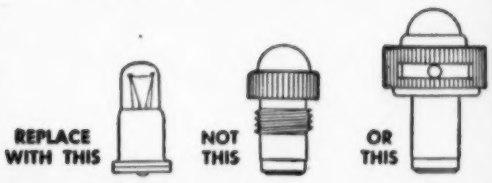
Easy lamp replacement with any midget flanged base lamp types

Complete blackout or semi-blackout dimmer types



MECHANICAL DIMMER
No. 11-1930-621

THESE ASSEMBLIES LOGICALLY REPLACE LAMPS NO. 319, 320, and 321



PLASTIC PLATE (EDGE) LIGHT ASSEMBLIES

AIR FORCE and BUREAU of AERONAUTICS
MIL-L-7806 DRAWING MS-25010

DIALCO *No. TT-51* (Red filter-black top) or, *No. TT-51A*, complete with No. 327 Lamp

ALSO MADE
with other filter colors and with *light-emitting top* (for indication)

ALL OF THE ASSEMBLIES ILLUSTRATED ACCOMMODATE LAMPS NOS. 327, 328, 330, and 331.

ANY ASSEMBLY AVAILABLE COMPLETE WITH LAMP

SAMPLES ON REQUEST—NO CHARGE

Foremost Manufacturer of Pilot Lights

The DIAL LIGHT COMPANY of AMERICA
60 STEWART AVENUE, BROOKLYN 37, N. Y. HYACINTH 7-7600

▲ For more details circle NED-738 on enclosed inquiry slip ▲

—prevent it with BWH ROTOCURED Belts!

Belts made by the flat press method start with two, ten, twenty or more "strikes" on them — depending on the length. Weakened segments result at 30- to 40-foot intervals because of press overlaps and hence, *overcuring*. The overlapping can't be avoided because each section when cured advances *less than a full press length*. Result: Premature failure.

To eliminate these weak segments, BWH engineers pioneered ROTOCURED CONVEYOR BELTS. They're made by continuous, constant motion curing. This endless technique of curing by eliminating overlapping, eliminates the weak segments. *Every inch* of the belt you buy is *FIRST QUALITY!*

You'll see this quality in *Increased Belt Flex Life* (up to 40%) . . . *Elimination of Mechanical Distortion at the Press Ends . . . Constant, Uniform Stretch . . . Uniform, Abrasion-Resistant Covers.*

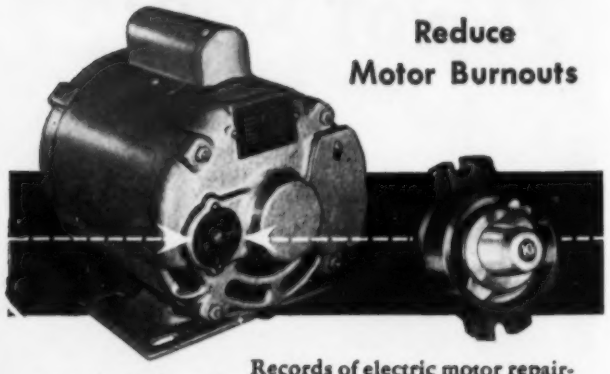
If you have a tough conveying problem — put it up to your BWH distributor and BWH ROTOCURED BELTS. Watch the cost per ton of material conveyed *go down!*

BWH — Another Quality Product of BOSTON WOVEN HOSE & RUBBER COMPANY — Distributors in all Principal Cities — PLANT: CAMBRIDGE, MASS. • P. O. BOX 1071, BOSTON 3, MASS., U.S.A.

▲ For more details circle NED-740 on enclosed inquiry slip ▲

Motor Repair Shop Experience Proves

KLIXON PROTECTORS



Reduce Motor Burnouts

Records of electric motor repairmen throughout the country provide positive proof that Klixon Protectors help prevent motor burnouts in electrical appliances of all types.

Mr. Alfred LaMontagne of the Cape Cod Electric Motor Service Company puts it — "In my ten years of experience with electric motors, I have found that Klixon Protectors save our customers unnecessary repairs. They are tamper-proof . . . and the lowest cost insurance against motor burnouts that you can get."

You, too, can provide your dealers and consumers with motor burnout protection by requesting and specifying that your motor manufacturer supplies you with motors that have Klixon protectors built in. The additional cost is exceptionally low, while the benefits are extremely high.

SPENCER THERMOSTAT
Division of Metals & Controls Corporation
1909 FOREST ST., ATTLEBORO, MASS.
KLIXON

▲ For more details circle NED-741 on enclosed inquiry slip ▲

For *Critical* Applications

Triplett 630-A Has No Counterpart

Accuracy to 1½%

Readability with a Mirror-Scale

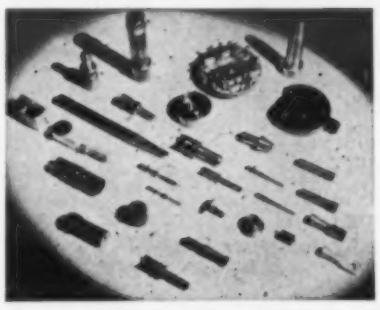
Adaptability with ½% resistors

Triplett Electrical Instrument Co., Bluffton — Ohio

▲ For more details circle NED-742 on enclosed inquiry slip ▲

New Processes & Materials

TELLURIUM COPPER is machinable for electrical parts



Readily machined for mass production of parts requiring high electrical conductivity and good mechanical properties, tellurium copper is supplied in hard or half-hard temper in rod and bar form. Addition of tellurium to pure copper does not materially reduce electrical conductivity, but it does greatly increase the ease of machining. Alloy can also be hot worked extensively. Somewhat less ductile than copper at room temperature, tellurium copper can be severely cold worked. It has high thermal conductivity. Made by **Chase Brass & Copper Co.**, Dept. N-9, Waterbury 20, Conn.

▲ For more details circle NED-743 on enclosed inquiry slip ▲

WATERPROOF MASONRY FINISH prevents efflorescence and staining

A silicone type water repellent, Silicote is applicable to concrete, cast stone, limestone, concrete block, unglazed tile, clay brick, plaster, stucco, gypsum, asbestos board, mortar joints and other masonry surfaces. Silicone assures deep penetration as water repellent, and coating prevents efflorescence and staining. Made by **Wilbur & Williams Co.**, 129 Lincoln St., Boston 35, (Brighton) Mass.

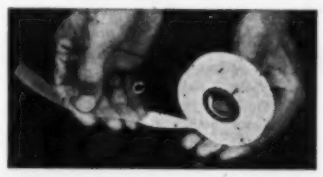
▲ For more details circle NED-744 on enclosed inquiry slip ▲

CARBIDE TEST KIT contains various shapes and sizes

Metallurgical, physical and chemical tests to check the corrosion, abrasion and erosion resistance of grade 608 cemented chrome carbide can be conducted with sample test kit containing variety of shapes and sizes of the material. This carbide grade is strong, stable, nonmagnetic metal which has almost the same density as SAE steel and about the same thermal coefficient of expansion as steel. Material shows high resistance to acids, salt spray, steam erosion and high temperature oxidation and is as machinable and hard as tungsten carbide. Kit contains three ¼ x ¼ x 2 in. bars, two ¼ x ¼ x 1 in. bars, three ½-in. OD by 5/16-in. long bushings with 5/16-in. ID and one ⅛-in. rod 1 in. long. Price is $10.75. Made by **General Electric Co.**, Carboloy Dept., 11163 E. Eight Mile Rd., Detroit 32, Mich.

▲ For more details circle NED-745 on enclosed inquiry slip ▲

ELECTRICAL INSULATING FILM adheres with slight pressure, and can be fused after application



Made from unfused Teflon, or tetrafluoroethylene resin, in flexible and stretchable form, PTF type B electrical insulating film can be fused into coherent mass after application. Available in 36-yd rolls in widths from ¼ to 6 in. and in 3, 5, 10 and 15-mil thicknesses, film can be used as class H insulation on conductors, coils, condensors, transformers and other installations operating at high temperatures, frequencies and voltages. Dielectric strength after fusing is more than 1000 v/mil and moisture vapor transmission, less than 1/10-gram per 100 sq in. over 24-hour period.

Material will resist degrading effect of ozone caused by arcing brushes in enclosed motors and generators. Opaque at first, film turns cloudy-transparent after fusing, which can be at 650° F in 15-20 minutes, or in 15 seconds at 1000° F. Ventilation must be provided since gaseous products evolved are toxic. Developed by **Minnesota Mining & Mfg. Co.**, Dept. NED, 900 Fauquier St., St. Paul 6, Minn.

▲ For more details circle NED-746 on enclosed inquiry slip ▲

DETECTO SCALES

There's a precision-accurate Detecto Scale for your specific weighing and counting need. The Detecto helps increase production, yet assures you maximum accuracy by making slightest weight discrepancies immediately visible.

DETECTO-GRAM NEW PACKING SCALE

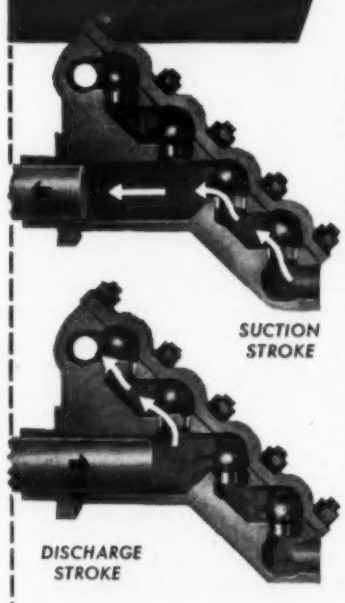
Another Detecto-Gram Scale for weighing your ingredients accurately. New Model #8800 brings to your heavy duty weighing jobs the mechanical accuracy previously found only in small scales. Capacity ¼ ounce to 60 lbs.

Write for Literature

DETECTO SCALES • INC.
MAKERS OF FINE SCALES SINCE 1900
541 N PARK AVE. • BROOKLYN 5, N.Y.
SCALE ENGINEERS IN ALL PRINCIPAL CITIES

▲ For more details circle NED-747 on enclosed inquiry slip ▲

NEED PRECISION PUMPING?



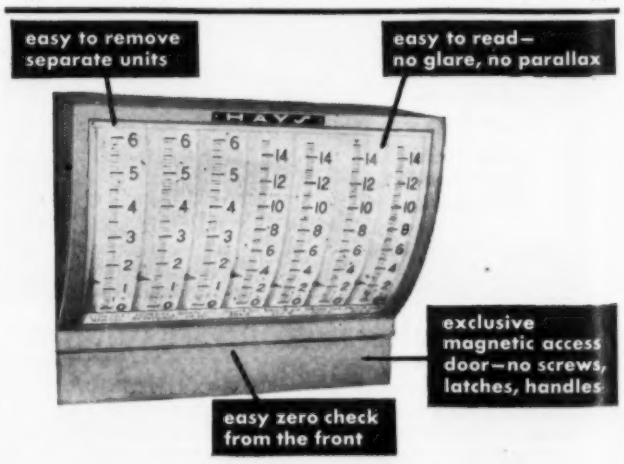
This exclusive Milton Roy Liquid End Step-Valve...

. . . is one of the big reasons why Milton Roy Controlled Volume Pumps—both Air-Powered and Motor-Driven—give you *precise* pumping. The valve is non-clogging, snap-acting, and seats positively. Air and gases cannot be trapped. *Double* ball-checks prevent loss of accuracy if one ball is prevented from seating by particles in the fluid being handled. Pumping against pressures up to 25,000 psi, within volume ranges from 3 milliliters per hour up to 1360 gallons per hour per liquid end, Milton Roy Controlled Volume Pumps handle any clear liquids, solids in suspension, and highly viscous materials such as tars and sludges.

For detailed information on the *exclusive* Milton Roy Liquid End Step-Valve Design . . . and on Controlled Volume Pumps . . . request Bulletin No. 151. Write today to—

MILTON ROY COMPANY
1304 E. MERMAID LANE • PHILADELPHIA 18, PA.

▲ For more details circle NED-748 on enclosed inquiry slip ▲



a new draft gage!

the HAYS Vertiscale *You* designed this draft gage! You asked for these features! • *Accessibility* from the front makes possible easy "one man" method of quickly checking zero. (The fast 3-way cock with test fitting is *standard* on the Hays Vertiscale). • *Simple maintenance*—individual units can be quickly removed for inspection or adjustment. Removal does not affect other units in the case, does not disturb calibration of unit being re-installed. • *No parallax*—design eliminates reflections regardless of viewing angle. • *No glare*—internal fluorescent lighting is standard. • You get all these values *plus* functional styling in the Hays Vertiscale draft gage! • *Write today for full information on the Hays Vertiscale Bulletin 52-1060-210.*

THE **HAYS** CORPORATION
MICHIGAN CITY 15, INDIANA

▲ For more details circle NED-749 on enclosed inquiry slip ▲

INDUSTRIAL DOORS
"PACKAGED" — *Ready to Install*

A 3 hour job for any maintenance crew.

Only the Prest-O-Matic comes to you with door and jambs, and all hardware including motor operator, completely assembled. This is your guarantee of perfect performance.

★ OPEN OR CLOSE IN 3½ SECONDS
★ PERMITS FULL USE OF DOORWAY WIDTH
★ NO ALTERATIONS OR FITTING NEEDED
★ SEALED AGAINST WEATHER OR WIND

PREST-O-MATIC

Industrial Doors function faultlessly because they are designed "in balance", utilize thrust and roller bearings and operating mechanism adequate to heaviest usage. Pneumatic, Pull-cord, Floor Plate or Electric Eye optional. *Write for Catalog!*

CLARK DOOR COMPANY
511 Hunterdon Avenue, Newark 8, N. J.

▲ For more details circle NED-750 on enclosed inquiry slip ▲

the National SAFE-LINE CLAMP

Like a giant hand might grip a thread —so the Safe Line Clamp holds wire rope in a positive non-slip grip.

The clamp is made in two parts, the inside of which is splined and the outside threaded top and bottom. The splines or spiral grooves grip the strands of the wire rope as the two parts of the clamp are placed together over the rope. Nuts over each end of the splined "grips" are tightened to complete the clamping action.

No dangerous wire ends protrude from the Safe-Line Clamp and its holding power is equal to several ordinary "U Bolt" clamps. The clamp may be reused repeatedly.

Get *all* of these features plus *extra safety.* Standardize on National Safe Line Clamps wherever wire rope is held together.

THE NATIONAL SAFE-LINE CLAMP IS STOCKED BY LEADING INDUSTRIAL SUPPLY DISTRIBUTORS

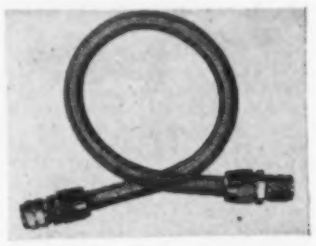
National SAFE-LINE CLAMP CORP.
11252 EAST NINE MILE ROAD • VAN DYKE, MICHIGAN

Subsidiary of The Lamson & Sessions Co. • Cleveland 2, Ohio

▲ For more details circle NED-751 on enclosed inquiry slip ▲

New Processes & Materials

FLEXIBLE PLASTIC TUBING
reinforced with stainless steel braid



Chemically resistant, transluscent, nontoxic and flexible, Tygon tubing and hose is now available with triple-wire stainless steel outer braid which reinforces it for high pressure applications. It absorbs vibration and will not crack, break or leak at pressures up to 300 psi. Available in six standard formulations and in running or fitted lengths, tubing is offered in ¼ and ⅜-in. ID. Fittings are stainless, and smaller size can be field applied while ⅜-in. fittings are factory applied. Tubing will handle virtually any liquid, gas or semisolid. Made by **U. S. Stoneware Co.**, P. O. Box 350-B, Akron, O.

▲ For more details circle NED-752 on enclosed inquiry slip ▲

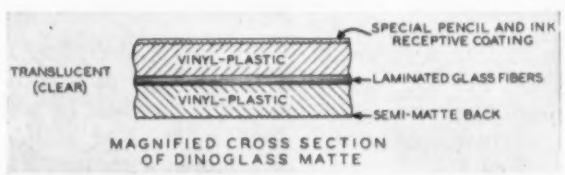
SAFE CONVEYOR BELT
static-free type minimizes hazards

Danger of fire or explosion in locations where there are dangerous concentrations of explosive dusts or flammable vapors is minimized by Mark 40 static-free conveyor belt. It is made of heavy duty stitched canvas with a smooth, conductive Neoprene coating that dissipates any static charge before it is built up. Conductivity of belt is controllable by varying compounding of coating. Belt is available in 37½ or 39-oz duck in any width up to 108 in. Belt can be recoated to extend its service life. Made by **Main Belting Co.**, Room 184, 1241 Carpenter St., Philadelphia 47, Pa.

▲ For more details circle NED-753 on enclosed inquiry slip ▲

VINYL SHEETS
for drafting and aircraft lofting

A translucent vinyl sheet which has been press laminated with glass fibers, Dinoglass meets all engineering requirements for dimensional stability in full-



scale drafting and aircraft lofting operations. Thermal coefficient of expansion is 0.0000247-in. per inch/degree F. Product is produced in 0.010-in. thick sheets with semi-matte finish on one side and pencil and ink receptive coating on work side. Sheet sizes range from 8½ x 11 in. to 50 x 108 in. Made by **Di-Noc Co.**, Photographic Div., 1701 London Rd., Cleveland 12, O.

▲ For more details circle NED-754 on enclosed inquiry slip ▲

Cross section above shows how KLEEN-SLOT SCREENS operate on a non-clogging, non-blinding principle.

★ It is not necessary to change your present machine to accomodate our Vibrator Screens. The wedge shape of the screen wire with its non-clogging, non-blinding features permits perfect separation on wet or dry screening. The rigid construction adds considerably to the screen's capability and efficiency. Proven in hundreds of installations.

SEND FOR OUR ILLUSTRATED CATALOG

Wedge-Wire CORPORATION
5604 CLARK AVE. CLEVELAND 2, OHIO

▲ For more details circle NED-755 on enclosed inquiry slip ▲

Here's a small, sturdy new air regulator that keeps line pressures dependably accurate — at a surprisingly low cost.

It has large capacity at all pressure settings. Responds instantly to increases in demand with minimum pressure drop.

Compact, it requires little space and is easy to install. Servicing may be done with valve in the line.

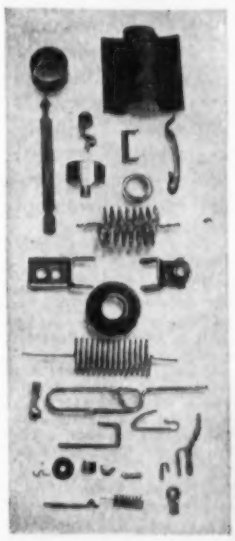
Initial pressures up to 250 lbs. reduced to any pressure between 5–60 lbs.; 60–100 lbs. Sizes ¼" to ⅛" with brass body. 2½" gauge included.

See your Mason-Neilan Industrial Distributor

MASON-NEILAN REGULATOR CO.
1189 ADAMS STREET, BOSTON 24, MASS., U. S. A.

▲ For more details circle NED-756 on enclosed inquiry slip ▲

Priced Right!
WIRE FORMS
& *Metal Stampings*



High-speed, quality production with custom-made precision. Wire formed to any shape for every need.

IMMEDIATE CAPACITY FOR DEFENSE SUB-CONTRACTS
STRAIGHTENING & CUTTING
Perfect straight lengths to 12 ft.
.0015 to .125 diameter
WIRE FORMS
.0015 to .080 diameter
SMALL METAL STAMPINGS
.0025 to .035 thickness
.062 to 3 inches wide

Specializing in Production of Parts for Electronic and Cathode Ray Tubes

Write for illustrated folder. Send Blueprints or Samples for Estimate.

ART WIRE and STAMPING COMPANY
15 BOYDEN PLACE
NEWARK 2, N. J.

▲ For more details circle NED-757 on enclosed inquiry slip ▲

Chicago MOUNTED Wheels

...now even better with **79E BOND**

Buy Chicago Mounted Wheels—bonded with 79E Bond—and you'll never use any other!

79E—a tough new bond exclusive with Chicago Wheel—is the sensation of the industry . . . it does a BETTER grinding, burring, and finishing job FASTER. A size and shape for every use. Deliveries are excellent—Order today.

CHICAGO WHEEL & Mfg. Co.
Dept. NED • 1101 West Monroe Street, Chicago 7

▲ For more details circle NED-758 on enclosed inquiry slip ▲

18 WAYS TO SAVE TIME & MONEY!

with the *Mead Industrial Burring Machine*

Wood-Plastic-Metal

New circular explains, illustrates 18 ways in which the Mead Industrial Burring Machine saves time and money—also contains Special Grit Guide. Every industrial plant needs this "Jack-Of-All-Trades" machine. Your burring can be done in "free time"—install these machines by every machine tool which leaves burrs. Grinds, finishes both outside and inside cut-out openings. Immediate delivery in most cases. Write for the informative Money-Saving circular now.

MEAD SPECIALTIES COMPANY
4114 NO. KNOX AVE. DEPT. NA-92 CHICAGO 41, ILL.

▲ For more details circle NED-761 on enclosed inquiry slip ▲

this new WELDING DESIGN MANUAL

FREE! FOR THE ASKING

To assist you in your re-tooling problems . . . or to help you analyze your present welding methods so that you may enjoy maximum speed, efficiency, and economy in many of YOUR production problems...

Giant new 4th Edition contains 62 new photographs, 132 new drawings, 72 pages of helpful data covering basic and advanced welding techniques and designs used in fabricating and assembly. Profusely illustrated with application drawings; weld diagrams; tables of melting temperatures, strengths, corrosion factors; charts; alloy recommendations; etc. Convenient digest size.

This just-off-the-press book is "must" reading for anyone engaged in defense production and design, and will certainly be time profitably spent for any production man.

SEE . . . The unbelievable savings in metal-joining which can now be yours through the use of "Low Temperature Welding Alloys"® discovered a few years ago and now used in over 78,000 industrial plants throughout America for more efficient metal-working production as well as for salvaging irreplaceable tool and machine parts.

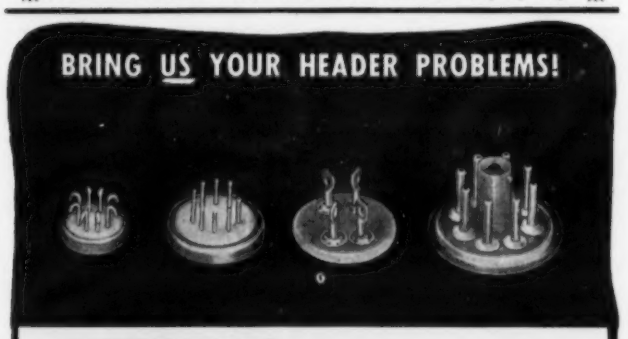
Over 100 different, new, EUTECTIC Low Temperature WELDING ALLOYS® and EUTECTOR® Fluxes are job-engineered for use on ALL metals—cast iron, alloy steels, aluminum, copper and nickel alloys, die castings, overlays, etc., and may be applied with ALL heating methods—torch, arc, furnace, induction heating, etc.

SEND FOR YOUR COPY TODAY!

EUTECTIC WELDING ALLOYS CORPORATION
172nd Street at Northern Boulevard • Flushing, New York, N. Y.

▲ For more details circle NED-762 on enclosed inquiry slip ▲

BRING US YOUR HEADER PROBLEMS!



SIMPLE OR COMPLEX — We make them all, ranging from 2- and 3-electrode crystal holder bases and standard octal headers, to 14- and 18-terminal headers for sealed Transformer and Relay applications — with a wide selection of styles and sizes in our series of basic designs.

SPECIAL DESIGNS — We also manufacture Sealed Headers and Terminals to meet special requirements, and will be glad to quote upon receiving your specifications.

COMPLETE ASSEMBLIES — We have facilities for handling the complete assembly of many units — including evacuating and pressure-filled enclosures.

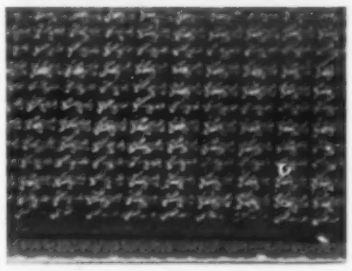
NEW CATALOG — Just off the press, a new Hermaseal catalog, with descriptions and specifications of some of our standard Sealed Headers and Terminals. Write for your copy today!

Hermaseal **THE HERMASEAL CO., Inc.**
Elkhart 20, Indiana

▲ For more details circle NED-763 on enclosed inquiry slip ▲

New Processes & Materials

INCLINED CONVEYOR BELTING carries loads at 25 to 30 degrees



Nonskid cover that grips package or product like the tread of a tire enables Tread-Top conveyor belting to handle loads on inclines up to 25 to 30 degrees. Full-width fabric permits belt to run over as small as 2-in. diameter pulleys. Natural rubber is employed throughout, and belt can be applied with metal fasteners or vulcanized into endless type. It is waterproof, brown in color and is offered in widths up to 48 in. Made by **Baldwin Belting, Inc.,** 76 Murray St., New York 7, N. Y.

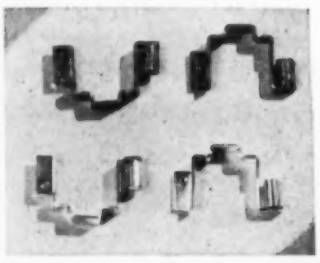
▲ For more details circle NED-764 on enclosed inquiry slip ▲

CLEANING COMPOUND for steel to be deep drawn, extruded

Designed for use as a precleaner for steel that is to be deep drawn or extruded, Detrex 61 compound is used in a soak tank at about 190° F. Concentration is from 6 to 10 oz per gallon. Compound removes oil, grease and dirt from all ferrous parts. It is free-rinsing and possesses high wetting and penetrating properties. Made by **Detrex Corp.,** P. O. Box 501-N, Detroit 32, Mich.

▲ For more details circle NED-765 on enclosed inquiry slip ▲

ALKALINE TIN-LEAD STRIPPER does not attack base metals



Rapid dissolution of tin, lead and tin-lead alloys from brass, copper, gold, Monel, nickel, silver, steel and stainless without attack on the base metal is possible with alkaline solder stripper. Chemical is used in concentrations of 1 to 3 lb/gal of water and is heated to 160 to 180° F. Tin and lead thicknesses of 0.005 to 0.010-in. are removed in one hour. Supplied as white salt mixture, chemical is kept in steel or stainless containers and does not deteriorate with age. Developed by **Enthone, Inc.,** Dept. NED, 442 Elm St., New Haven 2, Conn.

▲ For more details circle NED-766 on enclosed inquiry slip ▲

GRAPHITIC STEEL offered in hollow bar sections

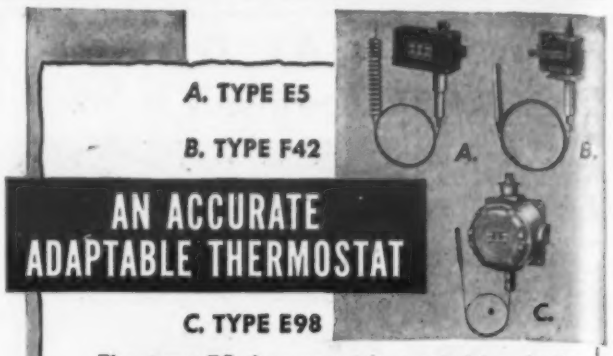
Using Graph-Mo tool steel, Graph-Mo Hollow Bar is turned and bored bar section. It combines advantages of graphitic tool steel with convenience of hollow bar section for making ring gages, dies and other annular parts. Stock sizes will range from 4 to 16 in. outside diameter with a variety of wall thicknesses. Made by **Timken Roller Bearing Co.,** Steel & Tube Div., Dept. NED, Canton 6, O.

▲ For more details circle NED-767 on enclosed inquiry slip ▲

WHEEL LAPPING METHOD uses diamond compound on wheel

Sharp cutting edges can be applied to cutting tools, and their life is extended at the same time, through use of a wheel lapping method which uses Spectrum diamond lapping compound applied to Spectrum lapping wheels. Compound is available in any desired grit and sub-sieve size. Wheels, made from materials that retain their shape and wear indefinitely, are interchangeable on all tool grinders. Kits contain diamond compound, lapping wheel, lapping oil, applicator and wheel charging roller. Wheels and compounds in 12 standard grit sizes can be purchased separately. Made by **Penn Scientific Products Co.,** 5941-A Alma St., Philadelphia 24, Pa.

▲ For more details circle NED-768 on enclosed inquiry slip ▲



AN ACCURATE ADAPTABLE THERMOSTAT

The type E5 thermostat is a precision-built temperature control which can be fitted with a wide variety of thermal assemblies and switches to suit the particular application. Temperature limits -150° F to +600° F.

The type E5 has been used on ovens, water baths, incubators, hot plate presses, cooling cabinets, air conditioning equipment, food and drink vending machines. Shown are three variations, the E5 covered by bulletin #3-2, Type F42 "skeleton" model covered by bulletin #3-3, and Type E98 in explosion-proof housing covered by bulletin #3-5. Write for information on the models of interest to you.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

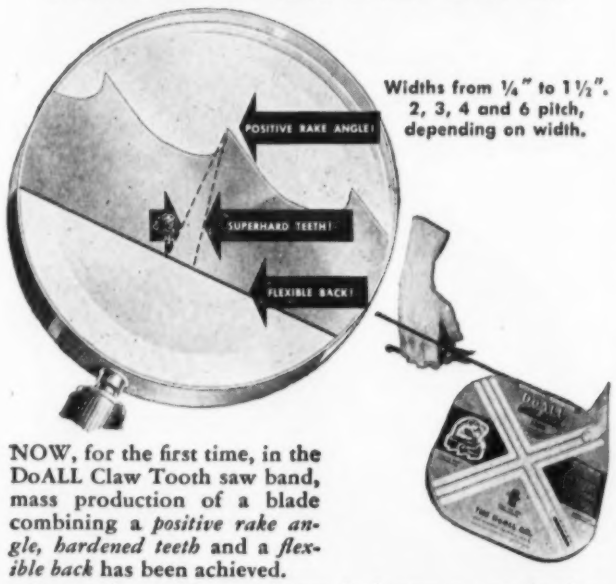
STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

▲ For more details circle NED-769 on enclosed inquiry slip ▲

NEW!

DoALL CLAW TOOTH SAW BAND...

FOR METALS, WOODS, PLASTICS— EXTRA FAST CUTTING, EXTRA LONG LIFE



Widths from ¼" to 1½". 2, 3, 4 and 6 pitch, depending on width.

NOW, for the first time, in the DoALL Claw Tooth saw band, mass production of a blade combining a *positive rake angle, hardened teeth* and a *flexible back* has been achieved.

Faster, free cutting with less feed pressure results from the hooked, claw-like teeth which actually "pull" into the material being sawed.

The superhard teeth give longer blade life with substantially higher cutting efficiency up to time of replacement than that of non-hardened blades which must be resharpened periodically.

The result is a blade that industry has been waiting for —a blade that reduces bandsawing costs and increases production when properly applied.

Ask for Literature
Complete information, prices, specifications available upon request. Call your local DoALL Sales-Service Store or write:

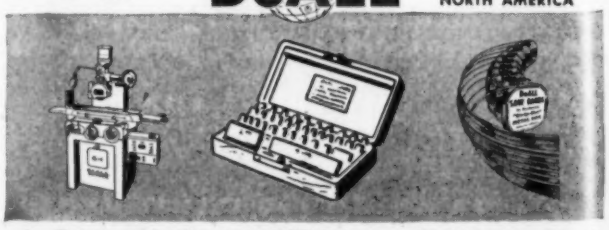
Eliminates Resharpening and Resetting—it's cheaper to replace long-lived Claw Tooth blades than to use blades which must be resharpened a number of times during their life.

Increases Production — more output per machine and manhour because of faster cutting and elimination of blade removal for resharpening.

Cuts Costs—higher production and elimination of blade maintenance labor and equipment means lower handsawing costs.

THE DoALL COMPANY
254 N. Laurel Ave., Des Plaines, Ill.

58—16½ DoALL 38 SALES-SERVICE STORES IN NORTH AMERICA



▲ For more details circle NED-770 on enclosed inquiry slip ▲

WHY tie up BIG PLATING EQUIPMENT on small jobs?

GET A Udylite HANDIPLATER

THE UDYLITE HANDIPLATER will handle small plating runs and troublesome "overflow" production *efficiently* and *economically*. Simply plug the HANDIPLATER into the nearest A-C outlet; make the low voltage D-C plating connection, pour in some plating solution from a regular tank or barrel, and the HANDIPLATER is ready! You get high-quality finish, efficiently, at low cost.

SPECIFICATIONS: Koroseal lined, ribbed plating tub, half peck capacity, can be used for either acid or alkaline plating solution. Size: 16½" top dia., 13" bottom dia., 14" depth. Ball anode basket is standard equipment. Special anodes for acid solutions also available. Motor: ¼ HP, single phase, 110 volt A-C. V-belt drive, with special speed reducer. Base: Pressed Steel, 14" x 24". Shipping weight: 200 lbs. (Shipping point is Detroit, Michigan.)

THE Udylite CORPORATION
DETROIT 11, MICHIGAN

▲ For more details circle NED-771 on enclosed inquiry slip ▲

This free booklet tells why

DISSTON

can make your SPECIAL STEEL PARTS

... accurately ... economically!

In this booklet are pictured the completely integrated production facilities of the DISSTON CUSTOM PARTS PLANT . . . from skilled engineering . . . through actual steel manufacture and heat treating . . . to final precision machining and inspection.

These facilities are *yours* to use—to cut costs and eliminate headaches in the production of replaceable heat-treated parts to your own exacting specifications. The booklet also illustrates typical parts the DISSTON CUSTOM PARTS PLANT has produced for other manufacturers and outlines the information required when forwarding an inquiry or an order. Send for it today! No obligation, of course.

HENRY DISSTON & SONS, INC.
929 Tacony, Philadelphia 35, Pa., U.S.A.
(Canadian Factory: Toronto 3, Ont.)

▲ For more details circle NED-772 on enclosed inquiry slip ▲

BARCO *High Pressure* SWIVEL JOINTS

for HYDRAULIC SERVICE
Tubing or Pipe

NO BINDING—A Barco design advantage! "Side Flexibility" in joint compensates for misalignment; simplifies and speeds up installation.

LEAKPROOF—A choice of precision-made seals for highest pressures, temperatures, and steam or corrosive service.

SMALL, LIGHT, COMPACT—Standard models for ¼", ⅜", ½" and ⅝" O. D. tubing (A/N, flared, or Ermeto) or comparable size pipe threads. Angle or straight connections.

PRESSURE SAFE—The seal will not break or blow out suddenly. Built to 3000 psi working pressure standards, steel or aluminum. *Send for literature.*

BARCO MANUFACTURING CO.
1830K Winnemac Avenue, Chicago 40, Illinois
In Canada: The Holden Co., Ltd.

▲ For more details circle NED-773 on enclosed inquiry slip ▲

New Processes & Materials

CHEMICAL-RESISTANT CLOTHING developed for industrial application

Reported to outlast most industrial garments, industrial work clothes of Chem-Weave in subdued color patterns have exceptional resistance to chemicals. Fabric is made by special weaving and processing of dynel synthetic fiber yarns. Fabric tests considerably stronger than cotton. Neither color or strength was affected in one test when immersed in 70 per cent sulphuric acid at 122° F for 20 hours. High factor of air flow through fabric contributes to wearer comfort. Matching shirts, work trousers, coveralls and aprons in full range of sizes for men and women are made by **Chem-Wear, Inc.**, 1 Boston Post Rd., Darien, Conn.

▲ For more details circle NED-774 on enclosed inquiry slip ▲

PLASTIC FLOOR RESURFACER resists grease, oil, ice, mild acid

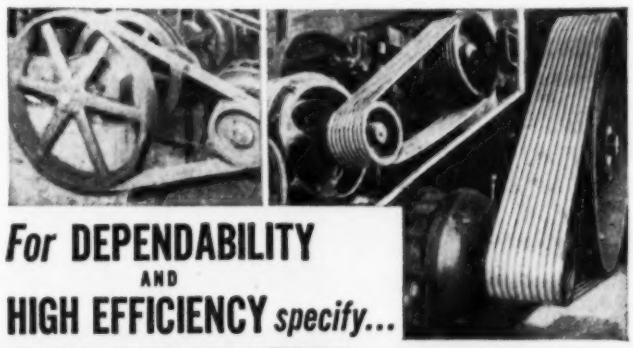
Containing pure latex and metallics, Dastex X plastic floor resurfacer can be laid over existing wood, concrete or metal floors and withstands heavy foot and trucking traffic up to 3000 lb. It can be used on steps, inside or outdoors, as an overlay and will resist grease, oil, water, ice and even mild acids. Product is furnished in 50-lb bags together with proper liquifier and requires no bonding agent or primer. It can be applied ¼ to ⅜-in. thick by trowel and smoothed out to tile-like finish. Available colors are red, black and green. Formulated by **Dasco Chemical Co.**, 1602 Thames St., Baltimore 31, Md.

▲ For more details circle NED-775 on enclosed inquiry slip ▲

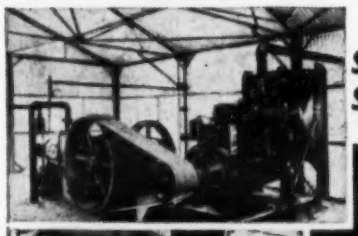
ABRASIVE PROCESSING MEDIA for grinding & deburring operations

Four types of abrasive chips are offered in many sizes to perform wide variety of grinding and finishing work. Used primarily for grinding, deburring and descaling, Grinding Chips are hard and irregular in shape to maintain continuously active cutting edges. Britehoning Chips are somewhat softer and are recommended for light deburring, polishing and honing to produce semilustrous finish. A natural fast-cutting material, Coruloy E Chips are applicable where a short time cycle and heavy cut is desired. Coruloy A Chips, manufactured synthetic abrasive, are used for fast deburring, grinding, descaling and polishing. Made by **Roto-Finish Co.**, 3702 Milham Rd., Kalamazoo, Mich.

▲ For more details circle NED-776 on enclosed inquiry slip ▲



For DEPENDABILITY AND HIGH EFFICIENCY *specify...*



WOOD'S *SURE-GRIP V-BELTS, SHEAVES and PULLEYS*
CONSULT YOUR INDUSTRIAL DISTRIBUTOR

T. B. Wood's SONS CO.
CHAMBERSBURG, PA.

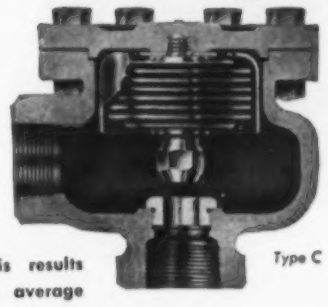
Mechanical Power Transmission Manufacturers—Since 1857.

CAMBRIDGE, MASS. • NEWARK, N. J. • DALLAS, TEXAS • CLEVELAND, O.

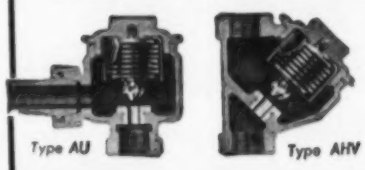
▲ For more details circle NED-777 on enclosed inquiry slip ▲

NICHOLSON TRAPS FEATURE

MORE capacity LESS parts



Note the extreme simplicity of Nicholson industrial steam traps. The only moving part is the heavy-duty bellows integral with valve. Note also the much larger valve orifice. This results in 2 to 6 times average drainage capacity. To see why an increasing number of leading plants are standardizing on Nicholsons for positive drainage and faster heat transfer, send for



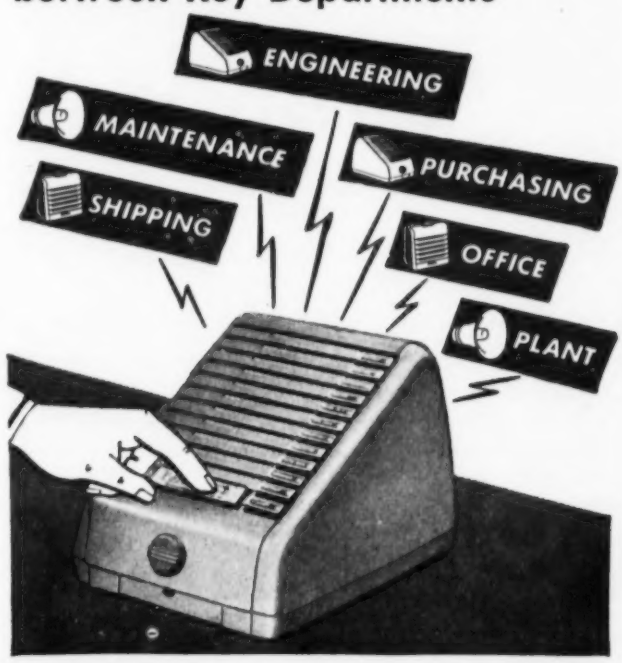
BULLETIN 152
162 Oregon St.
Wilkes-Barre, Pa.

W. H. NICHOLSON & CO.
TRAPS · VALVES · FLOATS

▲ For more details circle NED-778 on enclosed inquiry slip ▲

Step Up Production

with faster communication between Key Departments



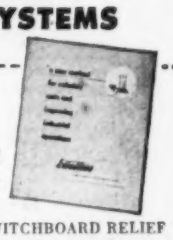
EXECUTONE Intercom puts every department at your fingertips—*instantly!*

Production moves faster when you don't have to wait for information. With Executone you talk to any department, anywhere in your office or plant—*instantly!* No time lost running back and forth. No waiting on "busy" inside phones. You get more work done—*faster!*

In the NEW Executone voices are amazingly crisp and clear. Installed and serviced by Executone-trained technicians. Low cost Executone soon pays for itself in dozens of ways.

Executone INTERCOM SYSTEMS

GET THE FACTS



EXECUTONE, INC., Dept. J-6
415 Lexington Ave., New York 17, N. Y.

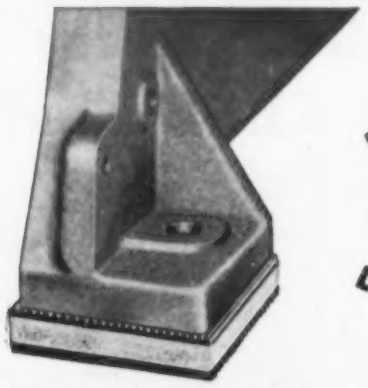
Without obligation, please send me full data on Executone Intercom. I am particularly interested in:

☐ INTER-OFFICE COMMUNICATION ☐ SWITCHBOARD RELIEF
☐ INTRA-PLANT COMMUNICATION ☐ INVENTORY CONTROL
☐ MATERIALS HANDLING CONTROL ☐ LOCATING PERSONNEL

Name.....Title.....
Firm.....
Address.....City.....

▲ For more details circle NED-779 on enclosed inquiry slip ▲

It's SIMPLE To Control VIBRATION and NOISE with Elasto-Rib...



NO BOLTING

NO CEMENTING

LOW COST

Elasto-Rib effectively stops transmission of vibration and noise by utilizing the elastic and damping properties of both cork and rubber.

It is fast and easy to install. For most machine applications, no bolts, lag screws or cement are required. Sheets 24" x 36" can be sawed or cut to size as needed.

New, illustrated booklet tells all about Elasto-Rib and how to install it. Ask for ER-701 and free sample.

THE KORFUND COMPANY, INC.

KORFUND VIBRATION CONTROL — SPRINGS — RUBBER — CORK

48-35P Thirty Second Place, Long Island City 1, N. Y.

In Canada: 510 Canal Bank, Ville St. Pierre, Montreal

▲ For more details circle NED-780 on enclosed inquiry slip ▲

INSURE Proven Quality with JONES PLUGS AND SOCKETS

P-306-CCT Plug, Cable Clamp in Cap.

Jones Series 300 Illustrated. Small Plugs & Sockets for 1001 Uses. Cap or panel mounting.

S-306-AB Socket with Angle Brackets.

- Knife-switch socket contacts phosphor bronze, cadmium plated.
- Bar type Plug contacts brass, cadmium plated, with cross section of 5/32" by 3/64".
- Insulation molded bakelite.
- All Plugs and Sockets polarized.
- Metal Caps, with formed fibre linings.
- Made in two to 33 contacts.
- For 45 volts, 5 amperes. Efficient at much higher ratings where circuit characteristics permit.

Ask for Jones Catalog No. 17 showing complete line of Electrical Connecting Devices, Plugs, Sockets, Terminal Strips. Write or wire today.

Jones — HOWARD B. JONES DIVISION, CINCH MANUFACTURING CORPORATION, CHICAGO 24, ILLINOIS, SUBSIDIARY OF UNITED-CARR FASTENER CORP.

▲ For more details circle NED-781 on enclosed inquiry slip ▲

WHAT ?!

NO BILLS!

Yes, no bills for Towels and Washroom Maintenance

With the perfected, automatic NATIONAL HAND DRYER —dries hands completely dry in 20 seconds!

Eliminates the constantly mounting cost of paper towels or towel service—no storage problem, no filling of cabinets, no removal, cleaning and disposal time or attention. No time when clean, sanitary drying service is not available. **Do you really know how much your wash room service is costing you?** One fast-acting, tamper-proof NATIONAL HAND DRYER serves 1½ to 2 wash basins, pays for its cost from actual cash outlays in 12 to 18 months, gives quick, soothing drying service at the touch of a button.

Let us show you an actual example of continuous cost savings with NATIONAL DRYERS over towels. Now Available for Industrial Users—220-volt Single Phase Models.

National Dryer Sales Corporation, Dept. NE2-9, 616 West Adams St., Chicago 6, Ill. Without obligation, send complete information on National Hand Dryers and example of cost savings.

( ) Also send information on National Hair Dryers.

Name .....

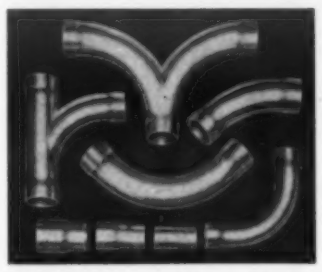
Address .....

City ..... Zone ..... State .....

▲ For more details circle NED-782 on enclosed inquiry slip ▲

New Processes & Materials

STEEL TUBING & FITTINGS for vacuum cleaning systems



Flanged ends simplify installation of VacuFlo welded steel tubing and fittings available in standard sizes for industrial, commercial and institutional vacuum cleaning systems. Joints are sealed on the job by brazing or welding. Various mastics for joining are also satisfactory. "Deadhead pockets" in T's and TY's which can collect direct and foreign matter are eliminated. Free-flowing directional design prevents backward installation of fittings. Stocked in 2, 2½ and 3-in. sizes are 45 and 90-degree turns, T's, TY's, bushings, couplings and other necessary fittings. Larger sizes on special order. Made by **H-P Products, Inc.**, 200 Broad St., Louisville, O.

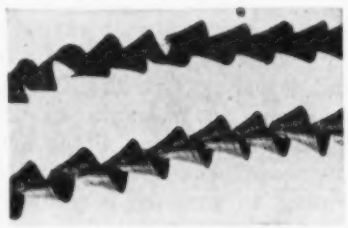
▲ For more details circle NED-783 on enclosed inquiry slip ▲

FINGERPRINT REMOVER for ferrous and nonferrous metals

Damage to products with close dimensional tolerances and ultra-smooth finishes caused by acids present in perspiration left by fingers and heavy staining can be eliminated by use of No-Rust FPR fingerprint remover. It establishes a corrosion preventing film sufficient to protect the part between manufacturing operations and during temporary storage. Application can be to steel, brass, copper, cadmium, magnesium, zinc and other metal surfaces by dipping, flooding or spraying. It contains a rust preventive and displaces water films by preferential wetting. Removal is by petroleum solvent. Made by **Gulf Oil Corp.**, Dept. 7, 722 Gulf Bldg., Pittsburgh 30, Pa.

▲ For more details circle NED-784 on enclosed inquiry slip ▲

WAX-TYPE CUTTING OIL improves metal-cutting action



Marked reduction in tool wear is reported for metal cutting operations which use Wax-Cut wax-type metal cutting oil. Lubricant has been tested in automatic screw machines, gear cutters, broaching machines, lathes and other machine tools. Reduction of heat minimizes smoking and loss of cutting fluid. Lubricant is free of chemically active additives, will not stain nonferrous metals and is harmless to machine bearings and gear mechanisms. Golden clear in color, Wax-Cut is odorless and will not turn rancid. In illustration, clear metallic color of chip at bottom is evidence of effectiveness of lubricant in reducing heat. Scorched chip at top was taken from same automatic screw machine, but standard cutting oil was used. Wax-Cut is made by **S. C. Johnson & Son, Inc.**, Dept. NED, 1525 Howe St., Racine, Wis.

▲ For more details circle NED-785 on enclosed inquiry slip ▲

ROOFING COMPOUND in four colors is fire-resistant

Completely fire-resistant, even when subjected to 200° F open flame, Dasruf roofing compound contains no cut-back tar, asphalt or solvents which might be

potential fire hazards. It is also entirely unaffected by short-wave light rays. Compound can be applied by brush or spray on damp or dry tar, felt or slag roofs. It will not sag, flow, alligator or carbonize during years of exposure to heat up to 200° F. Red, green and gray shades, as well as black are offered. Developed by **Dasco Chemical Co.**, 1602 Thames St., Baltimore 31, Md.

▲ For more details circle NED-786 on enclosed inquiry slip ▲

SEND FOR THE NEW P 40 PAGE WATER HEATER CATALOG

p-k catalog No. 202 provides you with a simple, rapid means of selecting the correct hot water heater for forced circulation. Capacities from 95 to 101,000 gph. Steam pressures range from 0 to 100 psig. Standard "U" Tube Heaters are available in 2- 4- or 6-pass construction. Water temperatures range from 40° to 100°F. inlet and 80° to 300°F. outlet.

other TAB INDEX FEATURES: Condensate Cooler tables • Dishwater Booster Heater tables • Gravity circulation tables • Hot Water Service Heater tables • Pressure drop tables • Typical piping arrangement

the P Patterson-Kelley Co., Inc.

790 BURSON ST., EAST STROUDSBURG, PENNA.

▲ For more details circle NED-787 on enclosed inquiry slip ▲

Wolverine PLUNGER TYPE TOGGLE CLAMP — W SINCE 1926

MODEL C-130-A

FAST • ACCURATE • POWERFUL

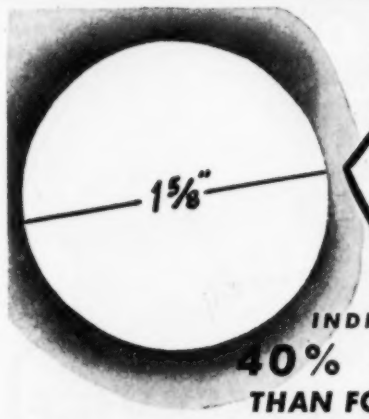
The combination of a precision ground plunger and an accurately broached hole permits this clamp to be used for locating as well as heavy duty clamping.

IMMEDIATE DELIVERY Write for catalog.

WOLVERINE TOOL CO. 1482 E. WOODBRIDGE DETROIT 7, MICH.

A WOLVERINE CLAMP TO SUIT YOUR NEEDS

▲ For more details circle NED-788 on enclosed inquiry slip ▲



YOU NEED ONLY THIS SIZE SPACE FOR STERLING INDICATING METERS 40% SMALLER THAN FORMER MODELS

Typical of Sterling's ability to produce just the right meter for your needs at moderate cost is this new small unit for A-C or D-C service. Available in ranges of 1 to 50 V, 1 to 30 amp, and 10 to 1,000 milliamperes—with high readability and accuracy. In dull, black, wrinkle or nickle finishes. Write today for complete facts.

Send for a Sterling catalog today — a complete line of meters for the electronic and automotive field.

STERLING MANUFACTURING COMPANY 7201 WENTWORTH AVE. CLEVELAND 2, OHIO

▲ For more details circle NED-789 on enclosed inquiry slip ▲

NEW VITROHM Ring Type RHEOSTATS

25 and 50 Watt

Bulletin 1110 Vitrohm Ring Type Rheostats set a new standard for smooth control, in both fixed and variable current control applications.

Ceramic core and base are bonded by Vitrohm enamel. Special alloy resistance wire is toroidally wound and held permanently secure by enamel. Design of drive shaft and contact arm eliminates backlash assuring uniform contact pressure and smooth operation.

Ratings: – 25 watts from 1 to 2500 ohms
50 watts from 1 to 7500 ohms
Based on 300°C rise in 40°C ambient, NEMA and U.L. Inc. standards.

Standard Resistance Tolerances: +20, –10 percent

Write for Vitrohm Rheostat Bulletin 1110. WARD LEONARD ELECTRIC CO., 51 South Street, Mount Vernon, N. Y. Offices in principal cities of U. S. and Canada.

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls Since 1892
RESISTORS • RHEOSTATS • RELAYS • CONTROL DEVICES

▲ For more details circle NED-790 on enclosed inquiry slip ▲

HUMIDITY

Within 1° Wet Bulb

If controlled air conditions are necessary for some important testing and research, here is a cabinet that provides 6 cubic feet of controlled air in constant circulation. Within the range of 40° F. to 140° F., this cabinet will maintain both dry and wet bulb temperatures within 1° F.

Heating and cooling, humidifying and drying, are all controlled automatically and uniform conditions are maintained as long as the unit is in operation. Outside indicators reveal the conditions inside the box at all times.

AIRE-REGULATOR

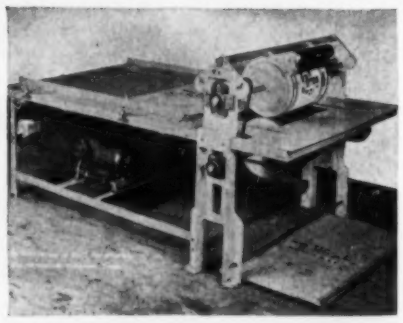
Constant Temperature and Humidity Cabinets are now in use by prominent laboratories in many lines for testing and research. Among the users are food manufacturers of all kinds producing bakery products, flour, packaged mixes, cheese, yeast, beer, candy and meat products; others are manufacturers of pharmaceuticals, photographic supplies, paints and varnishes, chemicals, insulating materials, instruments, box board, paper tape and crude oil products. Wherever there is a need for checking the action of temperatures and humidity there is a need for an Aire-Regulator. Write for bulletins and tell us your requirements.

FOOD TECHNOLOGY INC.
5925 Northwest Highway
Chicago 31, Illinois

FOOD TECHNOLOGY, INC.

▲ For more details circle NED-791 on enclosed inquiry slip ▲

PRINT YOUR OWN SHIPPING CONTAINERS OR MULTI-WALL BAGS AS YOU NEED THEM



Industrial's Auto Printer

is suitable for imprinting information, addresses, marking, or whatever you may require on your containers or multi-wall bags. It is capable of printing as many as 2400 units per hour. Eliminates hand stenciling.

This is just one of Industrial's coding and marking machines designed specifically for your needs to assure more efficient marking and movement of materials on production lines. Marking equipment is also available for conveyor line use.

Let us help you—send us your problem; we will do the rest.

Write for catalog today.

INDUSTRIAL MARKING EQUIPMENT CO.
Designers and Builders of Marking Equipment for Industry
Dept. NED, 454 Baltic Street
BROOKLYN 17, N. Y.

▲ For more details circle NED-792 on enclosed inquiry slip ▲

New Literature and Catalogs

Cushioned Check Valves

Golden-Anderson Valve Specialty Co.—Two detailed drawings show complete list of parts for line of hydraulic double-cushioned check valves in 2-page bulletin WS-1. Applications, construction, sizes and pressures are detailed.

▲ For more details circle NED-793 on enclosed inquiry slip ▲

Lift It Hydraulically

Century Products Co.—Construction features and applications of the model 1000 manually propelled hydraulic lift which sells for less than $300 are outlined in illustrated brochure. Powered by hydraulic pump, unit will elevate loads weighing up to 1000 lb for stacking, feeding or handling.

▲ For more details circle NED-794 on enclosed inquiry slip ▲

Research in Engineering Economics

Battelle Memorial Institute—Importance of engineering economics and scope of this organization's facilities are detailed in 16-page illustrated bulletin. Case histories of research projects in field of engineering economics as well as services which are available to industry are explained.

▲ For more details circle NED-795 on enclosed inquiry slip ▲

Screw Machine Cams

American Cam Co.—12-page illustrated catalog No. 9 is packed with information and details of standard and special tools, cams and blanks that are available for use on automatic screw machines. Ordering information and prices are included.

▲ For more details circle NED-796 on enclosed inquiry slip ▲

Electric Distribution Apparatus

Westinghouse Electric Corp.—If you are concerned with electrical distribution, you'll want a copy of 100-page illustrated catalog 50-000 which is entitled "Distribution Apparatus Digest for 1952." Complete data are given on distribution and dry type transformers, feeder-voltage regulators, instrument transformers, meters, instruments, capacitors, lightning arresters, fuse cutouts and links, switches, circuit breakers and insulators.

▲ For more details circle NED-797 on enclosed inquiry slip ▲

Overhead Handling

Cleveland Crane & Engineering Co., Cleveland Tramrail Div.—"Cleveland Tramrail Engineering and Application Data" is title of 12-page illustrated reference manual 2008-H. What overhead materials handling equipment consists of and how it can be applied to bring about more efficient operation are explained. Information is included on flexible track supports, carriers, switches, cranes, automatic interlocks and types of electrification.

▲ For more details circle NED-798 on enclosed inquiry slip ▲

new! revolutionary!

Pilot-Master

AIR CONTROL VALVES

Ingenious Design • Many Applications

New piston-operated poppet design in 2, 3 and 4-way Master and Pilot-Master Valves—also 10 new Pilot Valves for remote control.

ADVANTAGES
- Unique Removable Cartridge
- Fewer Valves to Stock
- Fewer Parts to Stock
- All-Electric or All-Pneumatic Hook-Ups

GET THE FULL STORY

All Sizes ¼" to 1¼"

Every Design Engineer and Tooling Specialist will want Bulletin 231—just off the press. Contains full details on the complete P-M line.

HANNIFIN

Hannifin Corporation • 1127 S. Kilbourn Ave., Chicago 24, Ill.

▲ For more details circle NED-799 on enclosed inquiry slip ▲

operating pressures recommended up to 1500 p.s.i.

CATALOG H-7 AVAILABLE ON REQUEST

"COMMERCIAL"
THE COMMERCIAL SHEARING AND STAMPING COMPANY
1775 LOGAN AVE. YOUNGSTOWN 1, OHIO

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WHICH DO YOU DO?

LOADING & UNLOADING
SHEET FEEDING
WORK POSITIONING
DIE HANDLING

RAYMOND

PORTABLE *Hydraulic* ELEVATING TABLE

FITS ALL FOUR!

No table has so many practical uses as this RAYMOND Portable Hydraulic Elevating Table! Use it for positioning or handling throughout the plant . . . see how it lightens your work load. RAYMOND Hydraulic Elevating Table has sturdy 30" square top which can be rotated when desired.

Convenient foot pump simplifies raising and lowering, leaves operator's hands free. Smooth-rolling casters make table highly portable. Floor lock holds it securely in place. Standard Model elevates from 28" to 44"; Telescopic Model from 28" to 50". Both models have 2,000 lb. capacity.

SEND FOR BULLETIN 232

. . . it gives you the facts on this RAYMOND Portable Hydraulic Elevating Table. Write for it today.

RAYMOND

ELECTRIC INDUSTRIAL TRUCKS • HYDRAULIC ELEVATING EQUIPMENT

The RAYMOND CORPORATION
Formerly LYON-Raymond Corporation
4169 Madison St., Greene, N.Y.

▲ For more details circle NED-801 on enclosed inquiry slip ▲

Take surface temperatures quickly, accurately... with the

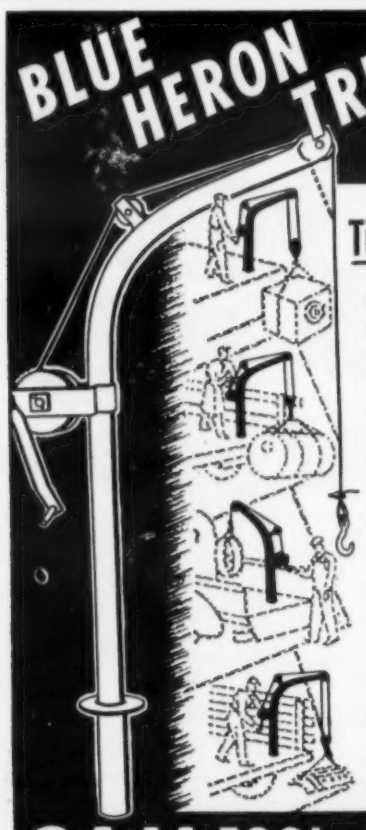
The handy Alnor Pyrocon is unequaled for quick, accurate reading of all surface temperatures . . . whether surfaces are metallic or non-metallic, flat or curved. Accurate temperatures are easily understood on the Pyrocon's direct reading scale face . . . without interpolation or need of conversion tables. A wide selection of thermocouples and extension arms permits adaptation to many types of service. For complete details and prices, send for Bulletin No. 4257. Illinois Testing Laboratories Inc., Room 549, 420 N. LaSalle Street, Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-804 on enclosed inquiry slip

BLUE HERON TRUCK CRANE SAVES

Time Money Labor



ONE MAN can handle up to ONE TON —EASILY and SAFELY!—with a BLUE HERON TRUCK CRANE. Crane swivels through full circle; one man can lift from socket, leaving truck body clear.

Equip ALL company trucks with sockets. Then change cranes from truck to truck.

CHOOSE THE MODEL WHICH FITS YOUR REQUIREMENTS
Model O.C. 30A Cap. 500#
Model O.C. 30B Cap. 1000#
Model O.C. 30C Cap. 2000#

CAM TOOL CO., INC. 11 RANDWICK AVE. OAKLAND 11, CALIF.

For more details circle NED-805 on enclosed inquiry slip

RIGHT AT THE SOURCE OF WASTE

For this 15 hp motor, power losses are corrected where it does the most good—*at the source.* A 4 kvar Sprague Power Factor Correction Capacitor across the terminals reduced reactive circuit current flow through transformers and wiring to a bare minimum . . . slashed power bills noticeably.

Sprague Unit-Cell Capacitors make it unnecessary to buy even one kvar more than you need. Write for the Sprague free guide of cost-saving suggestions, No. 50B.

SPRAGUE PIONEERS IN ELECTRIC AND ELECTRONIC DEVELOPMENT
SPRAGUE ELECTRIC COMPANY 183 Marshall St., North Adams, Mass.

For more details circle NED-806 on enclosed inquiry slip

New Literature & Catalogs

Dimension Control & Gaging

Sheffield Corp.—38-page illustrated booklet "Dimensional Control and Gaging Policy" covers such subjects as gaging policy, tolerances, reference temperature, gage specifications, ordnance practices, fixed gages, instruments, multiple semiautomatic and automatic gaging devices. Charts as well as descriptions of various types of gages and precision measuring instruments are also included.

For more details circle NED-807 on enclosed inquiry slip

Card Reference Equipment

Remington Rand Inc.—Maintenance of reference indexes and records is facilitated by Index Visible reference equipment. Unit consists of die cut cards which button into runways in a way that brings their upper edges into fixed position with uniform visibility. These runways which are attached to frames, Kardex slide, books, panels or folders are described and illustrated in 12-page folder KD608.

For more details circle NED-808 on enclosed inquiry slip

Gravity Wheel Conveyors

Harry J. Ferguson Co.—24-page bulletin 201 offers descriptive data on line of gravity wheel conveyors available from 12 to 24 in. wide and with 6 to 18 wheels to the foot. Booklet is illustrated to show standard and special applications of these units, as well as accessories for the complete line.

For more details circle NED-809 on enclosed inquiry slip

Constant Voltage Rectifiers

La Marche Mfg. Co.—Curves a-plenty are included in 8-page plastic-bound catalog on Constavolt constant voltage rectifiers. Design information is given, along with operational curves for the various models.

For more details circle NED-810 on enclosed inquiry slip

Steel Machine Screws

Sterling Bolt Co.—Wide range of steel machine screw sizes is available in round fillister and truss heads, according to information contained in a new listing. Included are such sizes as 6-32 x 5/16, 10-24 x ¼ and 8-32 x ¼.

For more details circle NED-811 on enclosed inquiry slip

Hydraulics from Cider

Hydraulic Press Mfg. Co.—"It Started with an Apple" is title of 36-page illustrated brochure issued on 75th anniversary of this company. It tells its story beginning with HPM's original hydraulic cider press and brings the reader up through the years to the production of today's giant presses. Present products of the company, applications, plant facilities and personnel are covered.

For more details circle NED-812 on enclosed inquiry slip

V-Drive Manual

Maurey Mfg. Corp.—Single and multigroove cast iron, pressed steel, variable pitch and no-hub V-belt pulleys, flexible couplings, V-belts, steel shaft collars, and fans and fan pulley assemblies are typical of the products described in V-Drive Catalog & Engineering Manual f-10. Capacities range from fractional to 10-hp. Engineering data section aids in selection and application of drive.

For more details circle NED-813 on enclosed inquiry slip

Protective Membranes

Broadway Rubber Corp., Acme-Fisher Div.—"The Laybond Family of Protective Membranes," a 12-page illustrated brochure, outlines the applications of and the facilities for applying Laybond rubber or plastic linings to tanks, pipe and fittings, ducts, pumps, impellers and other equipment subjected to corrosive chemicals. Steel fabricating can be done by company to minimize shipping costs. Specifications for covering or lining are given.

For more details circle NED-814 on enclosed inquiry slip

Foundry Mechanization

Allis-Chalmers Mfg. Co.—"Foundry Mechanization" is title of 16-page illustrated bulletin 25B6092C. Data are given on Foundromatic shakeouts, screens, motors, starters and controls for sand conditioning systems; casting cleaning pumps; combination dry-coolers; solids-handling pumps; fine-reduction crushers and vibrating screens for wet and thermal sand reclamation systems; cupola blowers; arc furnace controls and transformers; dielectric core dryer; and power generation and distribution systems.

For more details circle NED-815 on enclosed inquiry slip

Pantography Aids Rearmament Program

THE pantograph is a versatile machine tool that does precision profiling, routing, die sinking, mold cutting, chamfering, grooving and engraving. It is credited with increasing production and securing better end results at lower cost.

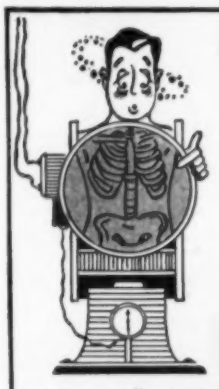
Production by pantograph means high surface finish and repetitive accuracy — a dozen or thousands of identical pieces. The pantograph has high spindle speeds, up to 45,000 rpm, and uses enlarged masters that improve accuracy through a reduction ratio.

This machine is useful in machining ferrous or nonferrous metals and plastics, in regular or irregular shapes. It accommodates jobs ranging from dime size to areas of 10 by 20 feet . . . manual operation, or automatic.

JOB ILLUSTRATED: Profile 6 locking lugs for male and female sections of new 3.5" Bazooka.
MATERIAL: Aluminum alloy.
CUTTER: 5/32" dia. single flute, fast spiral H. S. steel running at 3,900 rpm, without coolant.
MASTER: 2 masters: one for male and one for female sections; 3 times oversize, traced manually.
HOLDING FIXTURE: Pneumatic-operated internal expanding type.
APPROX. TIME: 36 pieces per hour.
ALTERNATE METHODS: *None practical.*

This "Pantography" booklet tells the complete story of faster production by pantograph. Write for it and the Gorton General Catalog, 1655: The George Gorton Machine Co., 1909 Racine Street, Racine, Wisconsin.

For more details circle NED-816 on enclosed inquiry slip



"See all" with... BOWSER FLOW SIGHTS

Bowser Flow Sights let you "see all"—enable you to keep a watchful eye on your liquid handling operation. It pays to know the quality or the approximate quantity that's going through your lines.

Available in either single or double window types, in gravity or pressure models with or without electric control switch. Bowser Flow Sights are made in various metals for a variety of liquids.

Fig. 811 Flow Indicator — Fig. 54A Flow Sight — Fig. 816 Teleflo Indicator

BOWSER, INC.
1381 Creighton Ave., Fort Wayne 2, Indiana

Liquid Handling Specialists Since 1885

For more details circle NED-817 on enclosed inquiry slip

In Connecticut

HARTZELL INGENUITY

EARNS A REPEAT ORDER

Automobile antenna motors burned out far too often on the test stand, because of lack of ventilation. That was the problem a Connecticut manufacturer tossed in the lap of a Hartzell field engineer. The Hartzell solution was a series of 4-inch ducts, one to each of 40 test stations, fed from a single duct powered by a Hartzell vaneaxial blower (VA21-BD). And how well did this solution work? *The plant operator plans a duplicate installation.* If something in the air is causing trouble, costing money, don't put up with it. Hartzell can knock it cold. Call your nearby Hartzell field man *now*, or get in touch with us.

HARTZELL PROPELLER FAN CO.
DEPT. G DIV. OF CASTLE HILLS CORP. PIQUA, OHIO
engineering representatives in principal cities

For more details circle NED-818 on enclosed inquiry slip

NOW for complete protection
FROM THE WET • GREASE • OILS • ORDINARY ACIDS

TOWER'S
FISH BRAND
*NEOPRENE

These sturdy, durable, 100% DuPont NEOPRENE garments give that extra service to those who require protection from greases, oils, and most acids. There is a TOWER protective garment especially adaptable for every type of industrial activity. We will be glad to recommend the garment which best meets your individual requirements.

*A chemical rubber product of the DuPont Company

For folder of styles and detailed information write Department SF.

NEOPRENE RUBBER

TOWER'S FISH BRAND
A. J. TOWER CO.
24 SIMMONS ST., BOSTON, MASS.
TOWER'S ARROW BRAND

For more details circle NED-819 on enclosed inquiry slip

FREE!

TO MACHINERY BUYERS

INTERSTATE BLUE BOOK of MACHINERY

An invaluable aid to every user of metal-working machinery. Issued regularly as a guide to one of the world's largest stocks of new, rebuilt and used machinery. Write today for FREE SUBSCRIPTION — no obligation.

INTERSTATE
MACHINERY CO., INC.
1453 W. Pershing Road, Chicago 9, Ill.

For more details circle NED-820 on enclosed inquiry slip

BAY STATE

Announcement by

Bay State Abrasive Products Co.
Westboro, Massachusetts

Our latest pioneering development, "GRITCLOTH"

AN OPEN MESH SANDING FABRIC
— LASTS 10 TO 15 TIMES AS LONG —

For more details circle NED-821 on enclosed inquiry slip

New Literature & Catalogs

Trucks-Trailers-Tractors for Industry

Mercury Mfg. Co.—Reference data on complete line of industrial tractors, trailers, for lift trucks, platform lift trucks and load carrying trucks are contained in 44-page two-color illustrated catalog 300. Types and sizes of materials handling units are described for loads ranging up to 30 tons.

For more details circle NED-822 on enclosed inquiry slip

Straightening Machines

F. J. Littell Machine Co.—How the economy and advantages of using coil stock in place of flat stock in press room operations can be realized through the use of 308 series variable speed straightening machines is outlined in 4-page illustrated bulletin section 3H. Operating details and capacities are outlined The 308 series includes 10 medium duty machines.

For more details circle NED-823 on enclosed inquiry slip

Retracting Power Cords

Koiled Kords, Inc.—Industrial applications of Retractile electrical power cords are subject of bulletin No. 1 in series of data sheets which show how and where to use self-coiling power cords. Their use on small hoists is detailed in bulletin No. 2.

For more details circle NED-824 on enclosed inquiry slip

Washroom Equipment

Bradley Washfountain Co.—Advantages of using group-washing fixtures for factories, institutions and other large buildings are related in illustrated catalog. Also described are various types of equipment which conserve floor space, water and maintenance.

For more details circle NED-825 on enclosed inquiry slip

Materials Dispensing Equipment

Lincoln Engineering Co. — Air motor operated pumps, Spray Pole and Flo-Guns, hose and accessories for applying materials and compounds of insulating, waterproofing, protective, adhesive, polishing, caulking, sealing and other types are covered in illustrated catalog 40.

For more details circle NED-826 on enclosed inquiry slip

Resins

Hercules Powder Co.—Neolyn resins for use in adhesives, plastics, lacquers and organosols are subject of 20-page illustrated technical data booklet. Specific and general properties of each of seven resins in this series are covered.

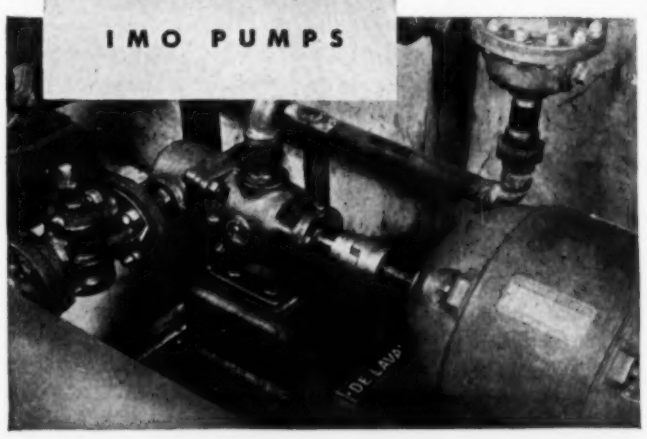
For more details circle NED-827 on enclosed inquiry slip

Finish Masking Techniques

Industrial Tape Corp.—"Mask Them Quick and Easy" is helpful illustrated handbook that shows short-cuts in the masking of cars, trucks and buses prior to spray-painting operations. Various types of masking products and aids are described.

For more details circle NED-828 on enclosed inquiry slip

DE LAVAL
IMO PUMPS



The unique De Laval IMO rotary positive displacement pump is unusually versatile . . . can be used efficiently on all types of fuel and lube oil handling jobs. Exclusive IMO design—with only three moving parts—assures long, trouble-free performance. IMO pumps are quiet, pulsation-free, compact and excellent for direct-connected high-speed operation. Write for Bulletin LG which shows the complete line of IMO's for capacities to 1,000 gpm at pressures to 500 psi and for capacities to 150 gpm at pressures to 1,500 psi.

DE LAVAL STEAM TURBINE COMPANY
Trenton 2, New Jersey

DL 134D

For more details circle NED-829 on enclosed inquiry slip

steel coming up . . .

costs going down for Modern

Modern Tool & Die, Inc., Cleveland, O., uses thoroughly *modern* handling methods throughout their plant. Shown above is their Robbins & Myers 7½-ton power controlled traveling crane which handles raw stock into storage and delivers it to the machine bays. In addition "Modern" uses a 5-ton R & M traveling crane on transport and assembly work in the machine bay, and four R & M "J" hoist-equipped jib cranes for handling stock into and out of machines, and for assembling components. "Modern" reports—no maintenance problems—handling costs away down over previous methods—and all employees welcoming R & M help because it increases their production time—decreases the labor of handling dies and parts.

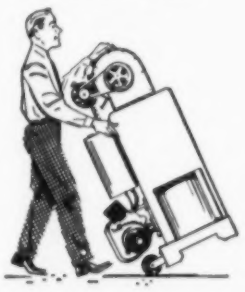
Perhaps some features of this successful R & M installation answer your handling problem. Your nearby R & M representative has detailed data on this and many other cost and time saving R & M installations. He can help reduce handling costs in your plant. Write for Bulletin N92D.

TAKE IT UP WITH
ROBBINS & MYERS INC.
HOIST AND CRANE DIVISION, SPRINGFIELD 99, OHIO

For more details circle NED-830 on enclosed inquiry slip

FAGEOL
heat machines
give you heat instantly where you need it!

MODEL PW-189
189,000 B.t.u. per hr. (no chimney or flue)
Also available in 168,000 B.t.u. capacity for vented and unvented use.



PORTABLE . . . also cools men at work in summer.

HEAT MEN AT WORK—NOT EMPTY SPACES

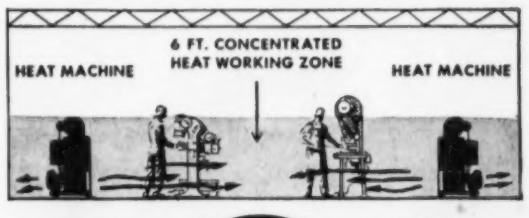
Just snap the switch!

Your Fageol Heat Machine will instantly pour out heat for keeping men warm at work, thawing materials and equipment, drying, treating, curing, heating buildings. *It solves loading dock heating problems!*

By blowing warm air out along the floor or ground, each Heat Machine creates a 6 ft. high heat blanket over areas from 1,600 to 3,000 sq. ft. Unlike ordinary space heaters, they heat where men work. Consequently, operating on No. 1 or 2 fuel oil, kerosene, or diesel oil, they save greatly on fuel costs.

A-6055

Write today for Bulletin L-5391



HEAT THE WORK ZONE

Fageol HEAT MACHINE CO.

FAGEOL HEAT MACHINE CO.
5725 Mt. Elliott Ave. • Detroit 11, Mich.

For more details circle NED-831 on enclosed inquiry slip

NOBUR Tools *turn a slow bench operation into fast and efficient machine work!* Remove burrs on multi-walled parts with a smooth, clean cutting action that won't mar highly finished surfaces. Eliminate rejects from slow, costly hand work with files, scrapers and abrasives.

Nobur Tools are used on any lathe, drill press, portable drill or flexible shaft. Operation of the double-edge cutting blade is easy and safe . . . no skilled help is required, and the spindle *never needs to be stopped* for either de-burring or chamfering.

Nobur Tools cut freely on either hard or soft metals, are simple in construction and are made in sizes to cover a full range of hole diameters. ***NEW "DS" SERIES extends range of NOBUR applications to holes as small as 1/8" diameter. WRITE FOR FULL DETAILS TODAY!**

▲ For more details circle **NED-832** on enclosed inquiry slip ▲

What to look for in a Gearmotor

This booklet takes you inside a Life-Line Gearmotor. Shows you what to look for in a gearmotor and how each part has a direct bearing on the gearmotor's performance. Split-case construction, taper-hardened gears and ample overhung load capacity are a few of the subjects covered.

Ask for "Looking for Something?" booklet B-5296. Get your free copy from your Westinghouse representative or write direct to Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

J-07318

YOU CAN BE SURE... IF IT'S Westinghouse Life-Line GEARMOTORS

▲ For more details circle **NED-833** on enclosed inquiry slip ▲

New Literature & Catalogs

Centrifugals

Heyl & Patterson, Inc.—Holland-made Reineveld centrifugals and separators are subject of 16-page illustrated manual which gives details of operating cycle, design, construction features, sizes and typical applications. Drum diameters range from 36 to 79 in. and speeds are 1500 to 880 rpm to give centrifugal forces from 1512 to 737 times gravity.

▲ For more details circle **NED-834** on enclosed inquiry slip ▲

Conveyor Case Studies

A. B. Farquhar Co.—28-page pictorial "Owner's Report" booklet is packed with case studies and pictures of actual installations of package handling, bulk handling, coal and special conveyors. These brief stories may suggest the answer to that tricky handling problem of yours. A copy is free for the asking.

▲ For more details circle **NED-835** on enclosed inquiry slip ▲

Drying & Dehumidifying

Pittsburgh Lectrodryer Corp.—"Because Moisture Isn't Pink" is intriguing title of 32-page illustrated manual that shows how various types and sizes of dehumidifying equipment solve moisture problems for industry. Use of absorption type dryers for production, handling and storage operations are shown and explained.

▲ For more details circle **NED-836** on enclosed inquiry slip ▲

Transportation & Handling Equipment

Cushman Motor Works, Inc.—Photographs and descriptions of Cushman industrial transportation and handling equipment is included in 4-page data sheet. Engine, lighting, brake, transmission and other specifications are given for personnel, package, stake and chassis-only models.

▲ For more details circle **NED-837** on enclosed inquiry slip ▲

Sound System Equipment

Electro-Voice, Inc.—Illustrated and described in condensed catalog 113 is line of microphones, speakers, horns, phonograph-pickup cartridges horn enclosures, television boosters and other equipment.

▲ For more details circle **NED-838** on enclosed inquiry slip ▲

Why Dry Under Vacuum?

F. J. Stokes Machine Co.—Above question is answered and methods and equipment for vacuum drying are described in 24-page illustrated catalog 720. Typical drying problems and their solutions are included. Mechanical description of rotary vacuum dryers, with cutaway illustrations, shows design details and construction.

▲ For more details circle **NED-839** on enclosed inquiry slip ▲

Insect Screens & Doors

Kane Mfg. Co.—Steel, bronze and extruded aluminum is used in manufacture of custom-built insect screens and doors described and illustrated in 24-page catalog. Hanging methods, cross-sectional drawings and specifications and general data are given for above items, plus combination screen-storm sash and lightproof shades.

▲ For more details circle **NED-840** on enclosed inquiry slip ▲

How to Select a Crusher

Pennsylvania Crusher Co. — "To the Man Who, Sometime, May Want To Select a Crusher" is the title and subject of this 12-page illustrated handbook. It explains in a nontechnical manner the various crushing methods and where they apply in crushing procedure.

▲ For more details circle **NED-841** on enclosed inquiry slip ▲

Plant Layout Templet

Repro-Templets Inc.—40-page illustrated "Master Planning File of Repro-Templets on Film" describes application and use of the templets in planning plant layout. Instructions for making material required and file of templets available are included. Listed are 2500 machine tool templets, 2500 nonmachine equipment items in various sizes and prices.

▲ For more details circle **NED-842** on enclosed inquiry slip ▲

Money Chests

Remington Rand Inc.—How money chests, available in a variety of sizes ranging from 175 lb to over 2 tons, can reduce burglary insurance rates is told in 12-page illustrated booklet SC 675. Chests can be installed inside safe-cabinets for double protection against fire and theft.

▲ For more details circle **NED-843** on enclosed inquiry slip ▲

Full Electric Fork Truck Operation in 6 FOOT AISLES*

The ALL NEW LEWIS-SHEPARD SPACEMASTER MODEL "M"

40% More Storage Space

. . . The "M" uses only 6 feet of this 10 foot aisle, leaving room for an extra row of stacked loads. You get more travel speed with more stability, plus higher lifts at faster speeds than with any similar truck . . . All controls are in the palm of one hand for quicker, safer operation.

Send for new SPACEMASTER Catalog

LEWIS-SHEPARD
1032 Walnut St., Watertown 72, Mass.
Sales-Service in Principal Cities
See "Trucks Industrial" in your Yellow Phone Book

▲ For more details circle **NED-844** on enclosed inquiry slip ▲

7 CHECKS FOR A GOOD GEARMOTOR

1 Split Housing . . . Assures easy access to working parts without disturbing alignment or draining oil.

2 Integral Bearing Supports . . . Antifriction bearings mounted direct in rigid housing, not in end brackets, mean permanent alignment of gear shafts—maximum overhung load capacity.

3 Precision Helical Gears . . . Hobbed and shaved after heat-treatment mean quieter, smoother operation—maximum load-carrying capacity.

4 Taper-Hardened Gears . . . Tapered hardness from surface to core assures extremely tough, wear-resisting teeth—means longer life.

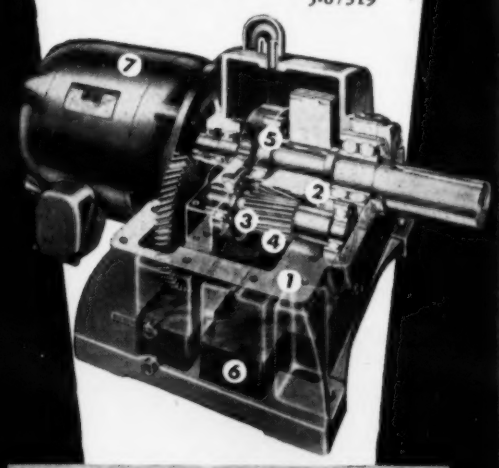
5 Integral Motor Design . . . Drive pinion mounted on motor shaft—no coupling to align and service—means fewer wearing parts, minimum maintenance.

6 Engineered Lubrication . . . Circulating splash system, protected-type breather, positive mechanical oil seals—mean thorough, leakproof lubrication.

7 Life-Line Motor . . . Pace-setting, industry-proved, compact steel motor with sealed-for-life bearings—means maximum motor dependability.

To get all these features, plus undivided responsibility for motors and gears, specify Westinghouse Life-Line Gearmotors. For more information, call in your Westinghouse representative. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penna.

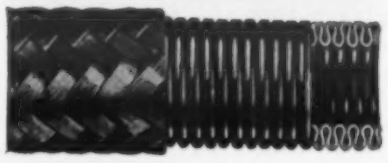
J-07319



YOU CAN BE SURE... IF IT'S Westinghouse Life-Line GEARMOTORS

▲ For more details circle **NED-845** on enclosed inquiry slip ▲

Remember the name "CORRUTUBE" for Continuous Wall Flexible Tubing



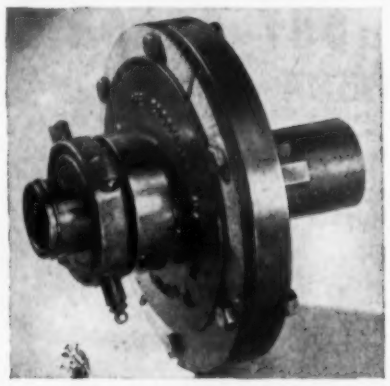
All characteristics of this flexible, continuous metal tubing recommend it above other tubing or hose for a wide range of applications. In addition to extreme flexibility, it provides greatest resistance to fatigue under high temperatures and pressures, assuring long service, free from costly maintenance and repairs. For steam, gases, oil, water, chemicals and many other fluids; and to counteract vibration and misalignment. "Corrutube" is made in steel and bronze, separately or in combination; and in three styles: plain; laced (illustrated); and laced with outer steel casing. Write for catalog MH-45.

"Mulconroy Starts Where Others Stop!"

MULCONROY COMPANY
Hose Specialties Since 1887
5331 JEFFERSON ST., PHILA. 31, PA.

For more details circle NED-846 on enclosed inquiry slip

EDGEMONT "K-E" DISC CLUTCH



—for stub or through shaft mounting on gasoline engines, electric motors, speed reducers, et cetera. Extended sleeve model illustrated, also available in cut-off coupling model. Both types available for shaft sizes up to 1¼". Bolted in split friction disc feature enables disc replacement without dismounting clutch or riveting. Clutches operate with light pressure—no grab. Rated at .8 HP at 100 rpm. they are self-locking when engaged, and have positive threaded steel adjustment. Write for Bulletin K-2.

THE EDGEMONT MACHINE CO.
2200 HOME AVENUE • DAYTON 1, OHIO

For more details circle NED-847 on enclosed inquiry slip

USE JOMAC®
INDUSTRIAL WORK GLOVES

For better hand protection. Jomacs will increase production by helping to reduce injuries in your plant. Made of Jomac Cloth—the famous thick, twisted loop pile fabric.

WASHABLE • FLEXIBLE • INTERCHANGEABLE • RESIST CUTTING, PROTECT AGAINST HEAT AND COLD

Write for samples and prices—describe intended use

C. WALKER JONES CO., PHILADELPHIA 38, PA.

For more details circle NED-848 on enclosed inquiry slip

New Literature & Catalogs

Explosive-Driven Fasteners

Ramset Fasteners, Inc.—Specifications on Ramset line of Tru-Set explosive-driven fasteners and accessories are found in 8-page illustrated form No. 68. The two fastening tools are described. Drive pins, external and internal threaded studs, utility head threaded studs and couplings are described and illustrated.

For more details circle NED-849 on enclosed inquiry slip

Electrical Contacts

Gibson Electric Co.—Intended to aid in selection and use of Gibson electrical contacts throughout all of the broad original-equipment fields, 12-page illustrated catalog C-520 describes properties and uses of the contacts. They are made from fine silver, palladium and nickel, silver alloys, and powdered metal compositions designated as Gibsiloys.

For more details circle NED-850 on enclosed inquiry slip

The Whole Line Described

Dayton Rogers Mfg. Co.—Complete line of this company's products and services is described and illustrated in 12-page catalog. Found in it are data on molded plastics and metal stampings in small lots, pneumatic die cushions, drawn shell trimmer, hydraulic overload pitman, adjustable spacing collars and layout fluid.

For more details circle NED-851 on enclosed inquiry slip

Gas-Fired Unit Heaters

National Radiator Co.—Five gas-fired unit heaters with welded steel heat exchangers, with input range from 55,000 to 200,000 Btu per hour, are subject of 4-page catalog No. 596. Component, cutaway and full-view illustrations are included, along with ratings, dimensions and roughing-in data.

For more details circle NED-852 on enclosed inquiry slip

Set Screws

Set Screw & Mfg. Co.—Various types of standard and self-locking set screws are described and illustrated in a combination catalog and reference book. Data on dimensions, prices, heads, points and materials are included, along with thread standard tables, standard fit definitions and other technical information.

For more details circle NED-853 on enclosed inquiry slip

Four Conveying Systems

Fuller Co.—"Four Basic Types of Conveying Systems Built by Fuller" is title and subject of 8-page illustrated bulletin G-1. Systems covered are: Fuller-Kinyon (stationary and portable types); Airveyor; F-H Airslide; and Fuller-Fluxo. They handle dry pulverized, crushed and granular materials. Miscellaneous equipment, including valves and feeders, is described.

For more details circle NED-854 on enclosed inquiry slip

CONSIDER THIS IMPORTANT FACT WHEN BUYING EXPANSION JOINTS

Compare the fine grain longitudinal weld of a Zallea Expansion Joint (1) with the ordinary weld bead of a competitive joint (2). Under brutal flexing tests to destruction, not one Zallea Joint failed at the weld! More important, Zallea bellows lasted up to *8 times longer* than those having ordinary weld beads. Want more particulars? Then send today for Catalog 47. It contains facts and figures to prove that your best buy in an expansion joint is Zallea. Zallea Brothers, 818 Locust St., Wilmington 99, Delaware.

Zallea

For more details circle NED-855 on enclosed inquiry slip

HERMAN CORRUGATED BOXES

Fit Into Your Over-all Profit Picture

★ Interplant Transportation
★ Machine to Machine Operations
★ Production Line Use

Take costly piece-by-piece handling out of your profit picture.
Speed Production, Save Labor with boxes of heavy gauge corrugated steel.

In standard sizes —or custom built to fit your job.

Model shown 24" x 36" x 12" deep. Available with round or square corners.

Karl A. HERMAN Company
412 FULLER AVE., N. E.
GRAND RAPIDS, MICH.

For more details circle NED-856 on enclosed inquiry slip

CUT COSTS ON CONCRETE FLOOR CARE

with MULTI-CLEAN CONCRETE FLOOR FINISHES and THE MULTI-CLEAN METHOD

Concrete floor maintenance ceases to be a time killer and financial burden with the efficient, economical Multi-Clean Method. Multi-Clean Neo-Dry Concrete Sealer or Multi-Clean Concrete Preserver fortifies concrete against abrasion, oils, acids. Eliminates flaking and dusting. Conditions surface for heavy traffic by imparting a tough, sanitary finish . . . is an excellent base for Multi-Clean Anti-Slip Waterproof Wax.

Eliminate long hours of scrubbing and sweeping with the Multi-Clean Scrubber and Multi-Clean Wet-Dry Vacuum, a floor maintenance team unexcelled for reducing floor care time and costs on every type of floor. Write us about your floors and we will show you how to profit by using the Multi-Clean Method.

Write Multi-Clean Products, Inc., Dept. NE-9 for more information.

Multi-Clean All-Purpose Scrubber

Multi-Clean Wet-Dry Vacuum

MULTI-CLEAN PRODUCTS INC.
2277 Ford Parkway
ST. PAUL 1, MINNESOTA

free! FLOOR MANUALS—Handy file size, each manual deals with a specific type of floor, its characteristics and care . . . concrete, terrazzo, wood, asphalt and rubber tile, linoleum.

For more details circle NED-857 on enclosed inquiry slip

Here's a new thin Class "H" Insulation... IRVINGTON Silicone-Coated Novabestos*

Only .0025" to .003" thick—suitable for continuous operation at 180°C—offering excellent electrical and good physical properties—Irvington Silicone-Coated Novabestos is ideally suited for any job calling for a thin Class "H" insulation.

Novabestos consists of very thin, very pure long-fiber asbestos formed into continuous-length rolls, and completely saturated and coated with silicone resin.

If you're looking for a thin Class "H" insulation, look into this new Irvington product. Write for technical data sheet.

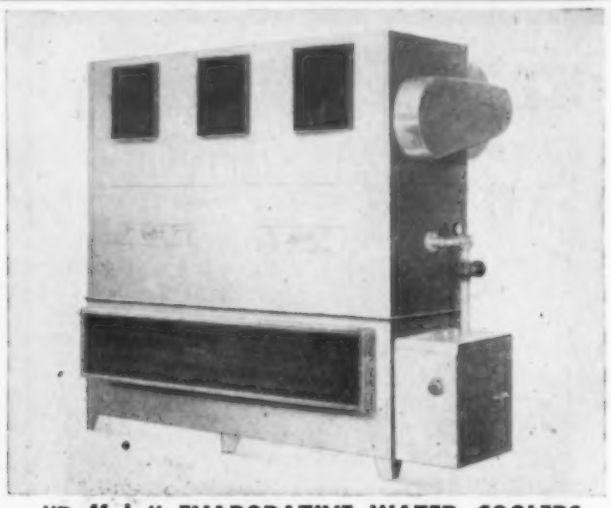
*Trade Mark of Raybestos-Manhattan, Inc.

LOOK TO IRVINGTON FOR INSULATION LEADERSHIP

IRVINGTON VARNISH & INSULATOR COMPANY
14 Argyle Terrace, Irvington 11, N. J.

Plants: Irvington, New Jersey; El Monte, California; Hamilton, Ont., Canada

For more details circle NED-858 on enclosed inquiry slip



"Buffalo" EVAPORATIVE WATER COOLERS
for economical, closed system cooling!

Cool cutting oils, diesels and other machinery with positive temperature control. "Buffalo" Evaporative Coolers pass the hot liquid through a closed system of spiral fin coils. Water spray evaporates the heat into the air stream passed through the unit. Indoors or out, you'll save with "Buffalo" Evaporative cooling. Write today for Bulletin 3666!

BUFFALO FORGE COMPANY
215 Mortimer St. Buffalo, New York
Publishers of "FAN ENGINEERING" HANDBOOK
Canadian Blower & Forge Co. Ltd., Kitchener, Ont.
Sales Representatives in all principal cities

"Buffalo" NEW MODEL "F" EVAPORATIVE COOLERS

▲ For more details circle NED-861 on enclosed inquiry slip ▲

Dependable
MEASURING & CHECKING EQUIPMENT

We also build jigs, fixtures, special tools and machinery. Send us your blueprints.

MACHINE PRODUCTS CORPORATION
6763 E. McNichols Road • Detroit 12, Mich.

▲ For more details circle NED-862 on enclosed inquiry slip ▲

60 years of dependable service

POTDEVIN COMBINING MACHINE

A new, high-speed machine that combines glued materials up to ½ inch thick and 30 inches wide

Designed for use either for hand feeding or set up in a production line. A safety switch is provided for separating the rubber covered rollers. Machine is mounted on a rigidly constructed steel frame, easily ported about on ball-bearing casters.

Other machines available from 24 to 48 inches wide or wider on special order. Machines for combining materials up to 1¼" are also available.

Write for literature on complete POTDEVIN line.

POTDEVIN MACHINE CO.
273 North St., Teterboro, N. J.
ESTABLISHED IN 1893 POTDEVIN
Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling.

▲ For more details circle NED-863 on enclosed inquiry slip ▲

New Literature & Catalogs

Carbide Drills

Ace Drill Corp.—56-page illustrated catalog presents full information on line of ground-from-the-solid drills. Included in standard line are such tools as type L drills for plastics, 12-in. Longboy drills, blanks, centerless ground reamers, solid carbide drills and Hi-Brinnell drills for hardened steel.

▲ For more details circle NED-864 on enclosed inquiry slip ▲

Eyeletting

Edward Segal—12-page illustrated booklet "Eyelet Setting Data" tells what eyelets are, how they should be selected and how they can be employed to best advantage. Discussed also are eyelet attaching machines.

▲ For more details circle NED-865 on enclosed inquiry slip ▲

Resistors

Ward Leonard Electric Co. — 64-page illustrated catalog No. 15 is devoted to information on complete line of Vitrohm power-type wire-wound resistors. Ratings range from 5 to 550 watts while resistance values listed are from 0.04-ohm to 1.75 megohms. Full details are given on terminals, mountings and enclosures.

▲ For more details circle NED-866 on enclosed inquiry slip ▲

Thermocouple Assemblies & Components

Leeds & Northrup Co.—"Thermocouples—Assemblies, Parts and Accessories" is title of 44-page illustrated catalog on units for plant and laboratory application. Recommendations, engineering and application data are given to aid in selection of proper unit for given conditions.

▲ For more details circle NED-867 on enclosed inquiry slip ▲

Miniature Ball Bearings

Miniature Precision Bearings, Inc.—Complete specifications are given for more than 120 miniature ball bearings in 4-page illustrated bulletin 52-B. Diameters range from 1/10 to 5/16-in. for radial, Conrad, spring separator, grooved radial, pivot, angular contact, thrust and other types.

▲ For more details circle NED-868 on enclosed inquiry slip ▲

Thermocouples, Detectors & Resistance Bulbs

Barber-Colman Co., Wheelco Instruments Div. — 42-page illustrated data book and catalog TC-9 contains prices, application recommendations and other information concerning instrument sensing elements and associated accessories. Included in listings are resistance bulbs and wells, radiation detector, special thermocouples and molten metal thermocouples.

▲ For more details circle NED-869 on enclosed inquiry slip ▲

Solderless Wire Terminals

Aircraft-Marine Products Inc.—Technical information concerning three-way quality control of wire termination process from the raw materials, through manufacture, to the finished installation is contained in 12-page illustrated bulletin "A-MP Quality Control." Design and manufacture of solderless terminals as well as inspection of installed terminals are covered.

▲ For more details circle NED-870 on enclosed inquiry slip ▲

Vacuum Metallizing

F. J. Stokes Machine Co.—"Vacuum Metallizing Today" is a conprehensive story of a low cost process for deposition of pure metals, alloys or salts on surfaces under high vacuum conditions. Described are various machines and equipment which facilitate use of these processes. If you're interested, just ask for Catalog No. 725.

▲ For more details circle NED-871 on enclosed inquiry slip ▲

Government Tape Specs

Minnesota Mining & Mfg. Co.—Two-dozen Scotch brand pressure sensitive tapes that meet various government specifications are described in 16-page illustrated manual. Complete data are given on tapes for packaging, holding, mending, masking, sealing, mounting, protecting, insulating and splicing jobs.

▲ For more details circle NED-872 on enclosed inquiry slip ▲

Small Electric Motors

Mission Electric Mfg. Co.—"Mission Accomplished" is 4-page folder that gives condensed specifications of various types of 60 to 1000-cycle motors, direct current motors and electrical units designed to conform to military specificatons.

▲ For more details circle NED-873 on enclosed inquiry slip ▲

TELEFLEX
MECHANICAL REMOTE CONTROLS

CONTROLS THAT LEAD THE FIELD IN

PERFORMANCE—Maximum efficiency is provided by the unique, screw-type Teleflex Cable. Minimum backlash is maintained by the high cable strength and the close fit between the Cable and the rigid Conduit.

SAFETY—Controls are designed with high margins of safety. End fittings feature positive locking to the Cable. Controls resist fire damage.

VERSATILITY—Controls are routed around obstructions by forming the rigid Conduit as required.

Teleflex controls are assembled on the production line from standard component parts. Straight line, angular or rotary control motions are made possible by the large variety of specialized end fittings.

Engineering service is available.

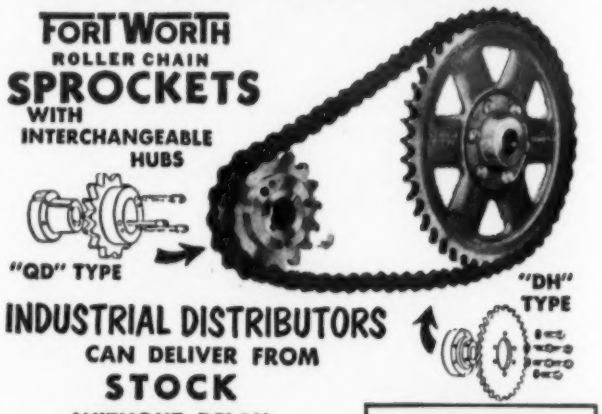
For further information write for catalog 300C.

TELEFLEX INCORPORATED
125 South Main St.
North Wales, Penna.

▲ For more details circle NED-874 on enclosed inquiry slip ▲

IMMEDIATE DELIVERY
WITHOUT REBORING!

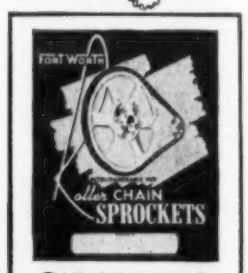
FORT WORTH ROLLER CHAIN SPROCKETS WITH INTERCHANGEABLE HUBS



INDUSTRIAL DISTRIBUTORS CAN DELIVER FROM STOCK WITHOUT DELAY FOR REBORING

FORT WORTH Sprockets Offer Many Advantages
- Actually Fits Shaft Better
- Reduces Cost of Spares
- Simplifies Changes
- Cuts Replacement Costs

HUBS ALSO FIT FORT WORTH TRANSCO V-BELT SHEAVES



CATALOG 300-C
Shows list prices and dimensions of stock QD & DH sprockets. Chain dimensions and drive recommendations are in easy-to-use form.

FORT WORTH STEEL AND MACHINERY CO
Dept. 229, 3600 McCart St. Fort Worth, Tex.

▲ For more details circle NED-875 on enclosed inquiry slip ▲

"WOVEN-Gards"
BETTER HAND PROTECTION
at amazing low cost

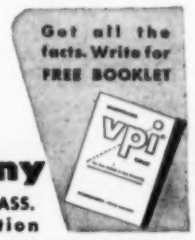
"Woven-Gards" are hand protectors, mitts, pads and sleeves made of a new long-wearing safety material. They provide flexibility, comfort, resistance to abrasion and cutting far beyond that of anything used before. They are extremely oil-absorbent and do an excellent job when handling oily, slippery sheets. The porous weave makes them one of the finest protectors for handling lower temperatures. Enthusiastic users say they have never seen values like "Woven-Gards." Excellent protection at lowest cost. Send now for descriptive folder and prices.

INDUSTRIAL GLOVES COMPANY, 1521 Garfield Street, Danville, Illinois
A Corporation
(In Canada: Safety Supply Co., Toronto)

▲ For more details circle NED-876 on enclosed inquiry slip ▲

Look at these steel samples — they tell the story. After 3 years of unsheltered storage outdoors in an industrial marine atmosphere, only the VPI wrapped sample on the right is still bright and clean. The untreated sample on the left was wrapped in plain kraft, the middle one treated with a good rust-preventive oil and wrapped in Grade A barrier material. All were overwrapped with kraft-asphalt paper. *Your* steel or aluminum parts can be equally well protected from corrosion. VPI, developed for government use during the war, is now available to everyone. Economical, easy to use, VPI can save you time and money.

Marvellum VPI is available in sheets, envelopes or special containers. Marvellum has complete facilities under one roof for designing, producing and coating VPI Wraps. Also makers of a wide range of other barrier materials to meet your needs for product protection. Distributors in all major cities.



The **Marvellum Company**
32 APPLETON STREET HOLYOKE, MASS.
First and Foremost in VPI Protection

For more details circle NED-877 on enclosed inquiry slip

ADD THE LAST TOUCH OF ENGINEERED QUALITY TO YOUR PRODUCT WITH . . .

NAMEPLATE PRESS

Now you can stamp neat perfectly aligned letters and figures on all types of nameplates with this easy to operate machine. Machinery Detail Plates—Keys—Tags—Checks and scores of other identification purposes. Fully Guaranteed.

PAINT-STICK

Paint-Stick brings out stamped or engraved impressions on all smooth surfaces. Use is by applying to surface and indentations, then rubbing off the surface with cloth, leaving paint in areas to be marked. Will not rub off or smear. **Sample box of one Dozen assorted colors is available for $5.00** DEPT. N.E.

THE CLEARVIEW CO., 177 Stanton St. N.Y.C.

For more details circle NED-878 on enclosed inquiry slip

PROBLEM **HOW WILL WE PUMP IT?**

ANSWER *with* **VIKING ROTARY PUMPS**

The simple positive, "gear within a gear" Viking principle has answered these problems for so many, so well, for so long, there is every good reason to know it will do it better for you.

What are your problems? Send them in today and ask for folder 52SG.

VIKING AN HONORED NAME IN PUMPING

Viking PUMP COMPANY Cedar Falls, Iowa
See Our Catalog in SWEETS

For more details circle NED-879 on enclosed inquiry slip

New Literature & Catalogs

Resistance Welding Equipment

Multi-Hydromatic Welding & Mfg. Co.—Units, machines, fixtures and presses designed for resistance welding are subject of 48-page illustrated catalog. Detailed are air and hydraulically operated resistance upsetting, rocker arm spot welders, projection welders, portable welders, hydromatic welders, multiple transformer welders, fixtures and gages.

For more details circle NED-880 on enclosed inquiry slip

Index of Industrial Instruments

Minneapolis-Honeywell Regulator Co., Brown Instruments Div.—20-page bulletin 100-A is an index of available technical literature on company's line of industrial instruments and components. Numerical and alphabetical cross indexing are given for specification sheets, instrumentation data, catalogs and other literature, including articles from quarterly publication "Instrumentation."

For more details circle NED-881 on enclosed inquiry slip

Small Electric Fork Truck

Lewis-Shepard Products, Inc. — Features of new model J low-cost electric fork truck for warehousing and industrial material handling operations are given in illustrated catalog. Trucks operate in narrow aisles and in limited floor space areas.

For more details circle NED-882 on enclosed inquiry slip

Research Instrumentation

Perkin-Elmer Corp.—A new concept of research instrumentation, "building block" unitized optical and electronic components capable of dealing with any research problem involving monochromatic light, is described in 24-page illustrated bulletin 103. Units can be added or subtracted to keep pace with problem requirements.

For more details circle NED-883 on enclosed inquiry slip

Resistors, Switches & Rheostats

Ohmite Mfg. Co.—20-page illustrated stock catalog 24 gives data on line of resistors, rheostats, tap switches and chokes. Sizes and prices of vitreous enameled rheostats, composition potentiometers and resistors, wire-wound resistors, rf plate chokes and power line chokes are given.

For more details circle NED-884 on enclosed inquiry slip

Pumps & Service

Yale & Towne Mfg. Co., Stamford Div.—From 20 to 200 gpm can be pumped by various models in line of Tri-Rotor pumps described and illustrated in 38-page catalog. Pump operation, accessories and descriptions of combinations and permutations possible with these accessories are among data included. One section has data to aid user in determining size of pump to be used and method in installation. Repair parts and service center at Stamford Div. is described.

For more details circle NED-885 on enclosed inquiry slip

IS THIS YOUR CONTROL PROBLEM?

1. How to indicate a change in resistance through a filter due to a clogging of the filter?
2. How to indicate a change in differential across an orifice due to a change in air flow conditions?
3. How to indicate an unbalanced condition of two air ducts?

MERCOID
HAS THE SOLUTION

A Diaphragm Differential Pressure Control which operates from minute changes (.03 of water) in the difference between two pressures.
Ranges to cover most applications—(inches of water) 6" vac. to 6" press., and 30" vac. to 30" pressure.
MERCURY SWITCH EQUIPPED

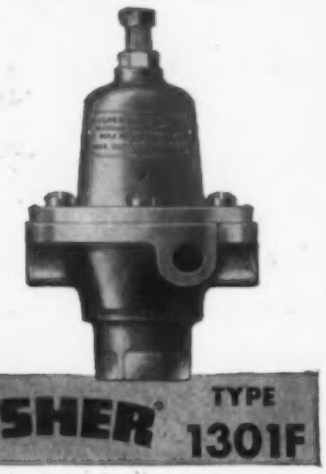
DIFFERENTIAL PRESSURE CONTROL — EXPLOSION-PROOF HOUSING — AVAILABLE IN WEATHERPROOF HOUSING

WRITE FOR BULLETIN
THE MERCOID CORPORATION
4201 BELMONT AVE., CHICAGO 41, ILL.
NEW YORK 17, N. Y. 205 E. 42nd Street
PHILADELPHIA 32, PA. 3137 N. Broad Street

For more details circle NED-886 on enclosed inquiry slip

HIGH PRESSURE REDUCING VALVE for AIR or GAS SERVICE

INLET PRESSURE UP TO 3000 PSI
OUTLET PRESSURE 10 TO 150 PSI



FISHER TYPE 1301F

TYPE 1301F is commonly used in conjunction with pilot operated controllers where high pressure operating medium is used. They are also used in general industrial applications for high pressure reduction of non-corrosive air or gas.

CONSTRUCTION:
All forged bronze construction with glass impregnated Teflon valve disc, stainless steel orifice. Furnished with one inlet connection and two outlet connections of ¼" pipe size.

PRESSURE RANGE:
Suitable for inlet pressures up to 3000 PSI; reduced pressure spring ranges of 10 to 75 PSI; 50 to 150 PSI. Adjustment screw for easy adjustment of reduced pressure setting.

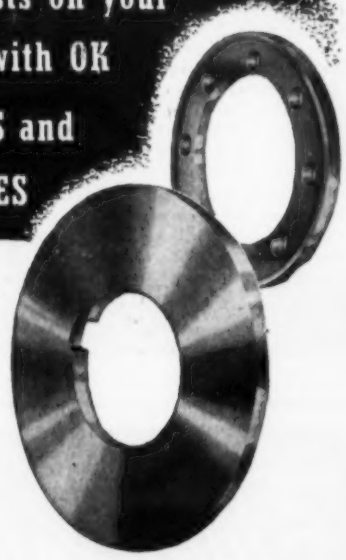
FISHER GOVERNOR COMPANY
Marshalltown, Iowa

For more details circle NED-887 on enclosed inquiry slip

it's **OK**

...let'er go!

cut costs on your toughest jobs with OK SHEAR BLADES and SLITTER KNIVES



Heat Treating does it. Gives them maximum toughness and keen edge holding qualities. You get longer runs between re-grindings.

OK Battle Axe Shear Blades for shearing up to and including ¼" mild steel or equivalent.

OK Dura-Chrome Shear Blades for shearing hot or cold plate steel up to 1¼" or equivalent.

OK Standard Shear Blades for any type shearing when only short runs or little shearing is done; also for heavy plate shearing.

OK Gang Slitters for slitting steel, precision ground to ± .0002 tolerance.

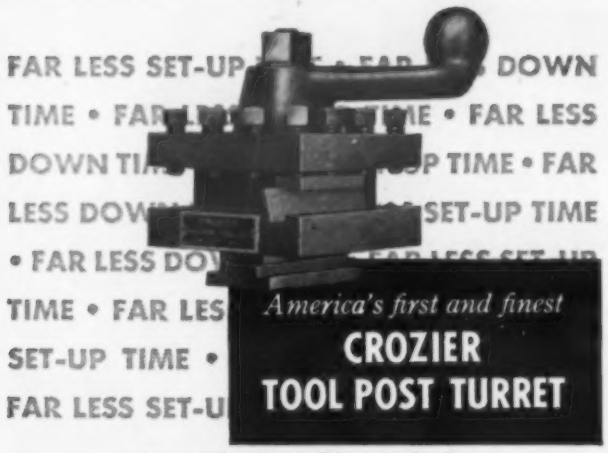
OK Rotary Shears and Cutters for trimming sheet steel and light plates.

Write today giving quantity and sizes.

GO WITH OHIO GREEN

THE OHIO KNIFE CO.
CINCINNATI 23, OHIO

For more details circle NED-888 on enclosed inquiry slip



now with 12 position indexing

12 position indexing now makes possible the alignment with work at any thirty degree increment.

This is only one of the outstanding features developed by the first and largest manufacturer of turrets for small lathes. Other features include built-in cut-off tool and holder and positive rapid indexing. All wearing parts are hardened and precision fit. They are available in three sizes.

Switch to Crozier Tool Post Turrets today. Save as much as 75% set-up and down time in lathe operations. In Crozier, you have America's precision-built tool post turret. Write for catalog.

CROZIER MACHINE TOOL CO. Dept. NED 9

Hawthorne, California

▲ For more details circle **NED-889** on enclosed inquiry slip ▲

NOZLITING **Faultless** ENGINEERED **TRUCK CASTERS** CUT HANDLING COSTS

NEW!
MEDIUM DUTY INDUSTRIAL CASTER
Cuts Handling Time —Saves Man-Hours

900 Series Double Ball Bearing Swivel Plate Caster with Vulcanized Rubber Tread Wheel

The 900 Series, all purpose, Truck Caster has heavy pressed steel horn and top plate, corrugated for extra strength. Swivels easily on *two* full rows of hardened balls rolling around *two* separate raceways. Choice of six kinds or wheels to suit load (*175 lb. to 550 lb.*) and floor surface conditions.

All the engineering "know-how" from *over half a century of specialized experience* is yours in Faultless Industrial Casters—to speed production lines, trucks, portable equipment . . . with *less time, noise, effort.* Ask for Cat. 156, no obligation.

FAULTLESS CASTER CORPORATION
Dept. NE-11, Evansville 7, Indiana
Branches in Principal Cities—Canada Factory: Stratford, Ont.

▲ For more details circle **NED-890** on enclosed inquiry slip ▲

Over 85% of the torque wrenches used in industry are

Sturtevant TORQUE WRENCHES
Read by Sight, Sound or Feel

- Permanently Accurate
- Practically Indestructible
- Faster—Easier to use
- Automatic Release
- All Capacities

in inch ounces ...inch pounds ...foot pounds
(All sizes from 0-6000 ft. lbs.)

Every manufacturer, design and production man should have this valuable data. Sent upon request.

P.A. STURTEVANT CO.
ADDISON QUALITY ILLINOIS

▲ For more details circle **NED-891** on enclosed inquiry slip ▲

New Literature & Catalogs

Small Rivets, Pins, Studs

Brainard Rivet Co.—Standard and special small rivets, pins, studs, etc., are described in 4-page illustrated bulletin. They are cold-headed and offered with electro-galvanized, zinc electroplated, black annealed, bright polished, graphite polished and other finishes.

▲ For more details circle **NED-892** on enclosed inquiry slip ▲

Flow Rate Regulators

W. A. Kates Co.—Principle of operation of direct-acting flow rate regulators is illustrated in 4-page bulletin 521. Regulators are unaffected by pressure fluctuations. Some applications are described.

▲ For more details circle **NED-893** on enclosed inquiry slip ▲

Standard Punches & Dies

Federal Machinery Co. — Ordering of standard punches and dies of various types for hand, foot and power presses is facilitated by the 32-page "Standard Die Catalog." It includes detailed diagrams, charts, tables and illustrations of typical machinery and equipment. Prices are included.

▲ For more details circle **NED-894** on enclosed inquiry slip ▲

Proportioning Pumps

Hills-McCanna Co.—Selection data included in 20-page catalog UP-52 makes it possible to specify the exact mechanical drive U-type metering and proportioning pump for any of over 300 listed substances. Specifications and prices are among information found in illustrated booklet.

▲ For more details circle **NED-895** on enclosed inquiry slip ▲

Pulverizing Mills

Mead Mill Co.—Typical grindable and ungrindable materials pulverized by line of high speed impact type pulverizers are listed and typical installation drawings are included in 4-page catalog. A cutaway view shows the impact principle. Dimensions of the five mills in the line are given, and a mobile laboratory unit is described.

▲ For more details circle **NED-896** on enclosed inquiry slip ▲

Rotary Metal Finishing

Roto-Finish Co.—How the Roto-Finish process has been applied to specific problems is shown in a series of editorial articles from metalworking journals. Case histories include these applications: Deburring close fitting transmission parts, Britehoning and deburring stampings, castings, forgings and machined parts.

▲ For more details circle **NED-897** on enclosed inquiry slip ▲

Tractor-Mounted Tools

Hyster Co.—Using a four-color cartoon style, this 16-page brochure "A Story of Tractor Tools and Their Uses" shows the use of tractor-mounted tools in such industries as railroading, construction, logging, mining and oil and gas. Tools are for attachment to Caterpillar tractors.

▲ For more details circle **NED-898** on enclosed inquiry slip ▲

Capacitors

Hammarlund Mfg. Co.—12-page illustrated 1952 catalog includes drawings and electrical and mechanical specifications on broad selection of standard variable air capacitors.

▲ For more details circle **NED-899** on enclosed inquiry slip ▲

General Purpose Packing

Durametallic Corp.—Described and illustrated in 4-page form No. 443 is Handy-Pack package of general-purpose packing for box rings. It is a combination of metallic and plastic packing. Specifications, prices and general uses are outlined.

▲ For more details circle **NED-900** on enclosed inquiry slip ▲

Technical Reporting

Written in a nonscientific manner, "Technical Reporting," a 289-page, cloth-bound book written by Joseph N. Ulman, Jr., is devoted to the presentation of information and ideas accurately and efficiently, using oral and written communication. Use is made of photographs, diagrams and charts in presenting some of the information. The book should be of assistance to many persons, whether they be writing interoffice memorandums or technical papers and reports. Among subjects covered are fundamental principles, general procedure, mechanics of reporting and grammar. Published by Henry Holt & Co., 383 Madison Ave., New York 17, N. Y., for $4.75.

▲ For more details circle **NED-901** on enclosed inquiry slip ▲

A—Deep crack. B—Tamping Smooth-On in. C—Crack completely sealed.

If You've Never Used SMOOTH-ON, *read this:*

Smooth-On No. 1 Iron Cement is a metallic powder which you mix with water to the consistency of putty. You tamp it, while still soft, into a crack or hole, making sure to force it against all surfaces. With Smooth-On you don't need to use heat or special gadgets. As it hardens, it expands slightly, clinging tightly in place. The repaired part is ready for use as soon as Smooth-On sets hard. Keep Smooth-On handy for both emergency and routine maintenance repairs. Buy it in 7 oz., 1 lb., 5 lb., 20 lb., or 100 lb. size. If your supply house hasn't Smooth-On No. 1, write us.

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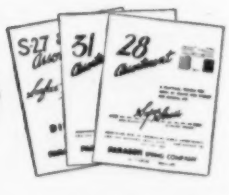

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Die cast, not turned! Free of tool marks and cut-off burrs; class 2 threads tapped square with face of nut.

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Die cast, not headed! Closer tolerances, more uniform heads for greater riveting efficiency. Dia. up to 9/64"; lengths to 5/16".

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Gries die cast zinc alloy fastenings are strong, durable, rustproof . . . economical, too! All Gries fastenings may be used without protective finishes in most applications. Furnished in all commercial finishes when desired. Prompt delivery on standard sizes—specials to order.

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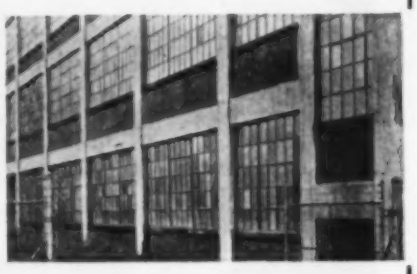
STEEL SASH can be saved At Low Cost . . .

From a simple job of reglazing or repainting to a major repair of badly warped or bowed sash, Tremco methods substantially cut maintenance costs.



TREMCO MEN "KNOW-HOW" makes possible effective results at substantial savings. Tremco Man J. L. Fahey expertly planned this low-cost sash saving job for Eberhard Faber Rubber Co., Newark, N. J. A trained Tremco Man like him is located near you. Costly to replace rusted and bowed steel sash was saved by welding in new members. Warped ventilators were tightly fitted, using Tremco's low cost methods. Complete re-setting of glass was avoided by Tremco "needle glazing". Painting with Tremco anti-rust compounds stopped further deterioration. Result: Weather-tight windows and improved appearance at a substantial savings. There is no obligation for Tremco Man inspection and advice. The Tremco Manufacturing Company, Cleveland, Ohio, or The Tremco Manufacturing Company (Canada) Ltd., Toronto.

UM-1021

TREMCO THE TREMCO MANUFACTURING CO. CLEVELAND, OHIO

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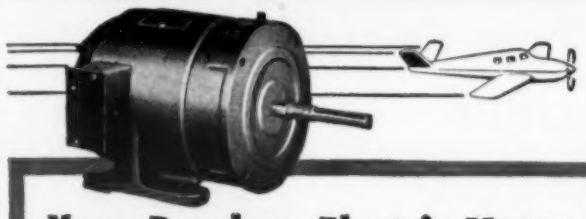

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$ for $ and lb. for lb. CUTS DEEPER AT 45°

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Now you get a heavy-duty, industrial saw that weighs only 10 lbs. and cuts 1⅞" at 45° . . . something no other industrial saw with a blade under 7¼" and costing under $115.00 will do. **magic ● pivot** does it! Yes, the simple but long-over-looked **magic ● pivot** engineering achievement puts the pivot point closer to the saw shaft, brings you performance found only in magic • pivot MAXAWS. Hard-biting "stub-radius" blades stand 3 to 4 more sharpenings . . . last twice as long. The MAXAW does more work . . . faster work . . . and costs less.

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New Literature & Catalogs

Vacuum Tube Electrometers

Keithley Instruments—Descriptions and application diagrams of 17 basic uses for vacuum type electrometers and accessories are contained in 8-page bulletin. Uses include potential measurements to 200 v, extreme sensitivity in detection of static fields, current measuring to 10^{-14} amp and resistance up to 10^{16} ohms.

▲ For more details circle **NED-908** on enclosed inquiry slip ▲

Carburizing & Tempering Baths

A. F. Holden Co.—Charts on relative case penetrations at various times and heats, savings made with carbon blanket cover, amount of salt to be added each 8-hour period to balance bath and maintain operating efficiency, and instructions for controlling distortion of work to less than 0.001-in. are contained in 4-page illustrated bulletin "Holden Carburizing Baths."

▲ For more details circle **NED-909** on enclosed inquiry slip ▲

Masonry Waterproofer

Stonhard Co.—According to 4-page illustrated folder "Stonhard Stonseal", water bounces off masonry surfaces treated with this invisible raincoat for leaky walls or foundations. It keeps buildings dry, yet allows masonry to breathe.

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Cold-Drawn Tubing

Babcock & Wilcox Co., Tubular Products Div.—Advantages accruing from use of seamless cold drawn carbon steel mechanical tubing in production of hollow precision parts are outlined in illustrated bulletin TB 339. Tables of tolerances and mechanical properties are included.

▲ For more details circle **NED-911** on enclosed inquiry slip ▲

Electrical Fittings

Buchanan Electrical Products Corp.—Line of solderless wire connectors, cable and conduit fittings and wiring devices have their specifications, dimensions and application instructions given in 12-page illustrated catalog 52.

▲ For more details circle **NED-912** on enclosed inquiry slip ▲

Prelubricated Conveyor Bearings

Arguto Oilless Bearing Co.—20-page illustrated technical catalog covers specification, installation and application of lubricant impregnated bearings in screw and roller conveyors. Engineering data are tabulated to aid in selection and design.

▲ For more details circle **NED-913** on enclosed inquiry slip ▲

Motor Case Histories

Westinghouse Electric Corp.—Picked from over ¾-million Life-Line motor applications in existence today are the over 100 case histories of outstanding applications depicted in 36-page illustrated booklet B-4769. Application problems involved, motor chosen and results for each case are given.

▲ For more details circle **NED-914** on enclosed inquiry slip ▲

How to shockproof 300 ft. of conveyor!

With 300 feet of conveyor—and an intermittent loading of from 50 to 250 full bottle cases in the plant of a Milwaukee bottler, two electric motors fought against each other. A Twin Disc HYDRO-SHEAVE Drive was installed at each power station—installed in a few minutes directly onto the motor shaft, in the normal sheave position.

The HYDRO-SHEAVES, by transmitting the power through fluid, permit a *soft balanced* drive in which motors can pick up a full load cleanly, without jerking or stalling to eliminate entirely many of the reasons for costly operation.

You, too, can save dollars and smooth out the cycle with HYDRO-SHEAVE Drives—manufactured only by Twin Disc. Write today for Bulletin No. 145-B or a complete file of Installation Reports.

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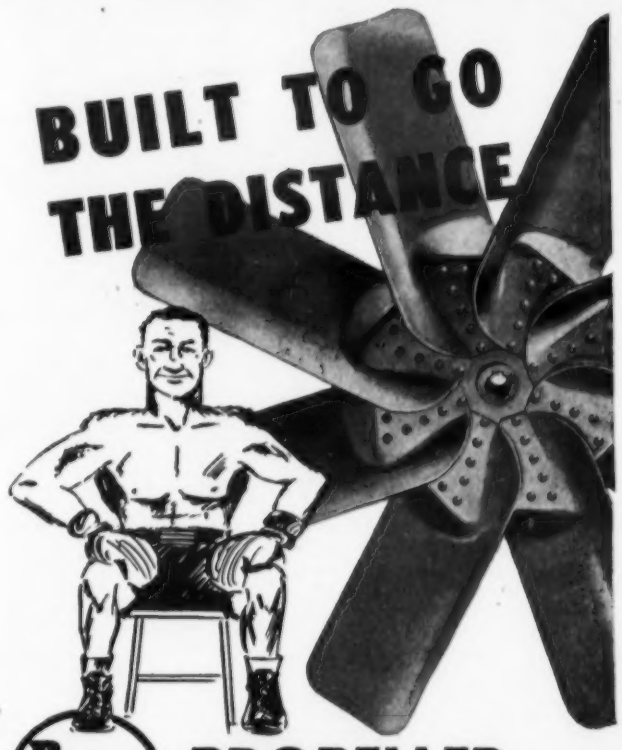

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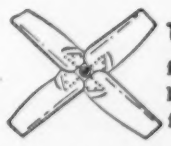
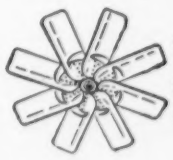
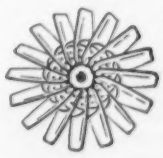
B.F.C. Propeller Fan Wheels are ruggedly constructed of heavy steel . . . they are long wearing, with a high resistance to abrasive wear due to atmospheric dust . . . especially effective for heavy duty work. Blades, drawn to form a cantilever action to insure correct pitch and rigidity, are securely riveted to heavy steel center plates that form a strong support for the blades and maintain correct tracking. Accurately balanced.



Type "IC" Propeller Fan Wheels— for use in free discharge fans and ventilators, for spot ventilation in steel mills, foundries, heavy industrial plants, etc.



Type "LS" Propeller Fan Wheels— for use in power ventilators, cooling towers and similar applications.



Type "HP" Propeller Fan Wheels— for use in high pressure ventilators, tube axial type fans and similar applications where higher pressures are encountered.

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Whether you're finishing a casting, a weld, a fine die or stainless steel surface, you'll get the equipment that will do the job best from the best-known name in flexible shaft equipment—Haskins. Here is a company with a world of finishing experience to offer you—and a line of flexible shaft equipment in which long-life, multiple usefulness and economy have never been sacrificed to price.

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Jet pilots depend upon electrical controls for safe, maneuverable flying, clear communications and precision gunnery. Guardian Electric—makers of all types of control stick grip switches and control panels—is a major supplier to the U. S. Air Force. Guardian Relays, either open mounted or *hermetically sealed*, are used extensively for airplane design, maintenance and repair. Along production lines Guardian Relays are usually associated with Thyratron Tubes working with other Thyratron or Ignatron tubes to control the current for spot, projection, seam and other types of resistance welding. Reduced maintenance costs, better welds, better ships in the air, better armament result with Guardian Relays in action! *Write.*

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For more details circle **NED-922** on enclosed inquiry slip

New Literature & Catalogs

Protective Coatings

Insul-Mastic Corp. of America—Offered as a guide to maintenance and for writing of specifications, 44-page illustrated catalog "Insul-Mastic in Industry" describes the Gilsonite-base protective coatings, their properties, uses and tests to which subjected. Related products, such as caulking compounds, primers and membraning are included. Coatings withstand contaminated atmosphere, are waterproof and act as weather barrier. Cork filled coating, also described, prevents corrosion and insulates as well.

For more details circle **NED-923** on enclosed inquiry slip

Tabletting Presses

F. J. Stokes Machine Co.—Usable in pharmaceutical, powder metal, industrial and plastic preform production, line of single-punch, rotary, mechanical and hydraulic presses for tabletting applications is described in 24-page illustrated catalog 800.

For more details circle **NED-924** on enclosed inquiry slip

Industrial Magnifier

Bausch & Lomb Optical Co.—"Industrial Magnifiers—How to Choose and Use Them" is a 24-page illustrated guide. Optical principles of magnifiers is outlined, basic types are described, and selector chart and glossary of terms are included. Uses of magnifiers in shop, laboratory and office are explained.

For more details circle **NED-925** on enclosed inquiry slip

"Come to Yarway"

Yarnall-Waring Co. — In the 16 well-illustrated pages of the brochure "Come to Yarway" one is given an introduction to the company, its products and personnel and its facilities. Growth of the company is described in word and map. Another map shows plant and office layout, making it valuable to those calling on company.

For more details circle **NED-926** on enclosed inquiry slip

Handling Truck Power Units

Ready-Power Co.—Gasoline-electric and diesel-electric power units for electric materials handling trucks are described in 8-page illustrated bulletin 99 Rev. Capable of being operated continuously, units cover various sizes and ratings for all types, sizes and makes of industrial trucks. Over 70 application photos are included.

For more details circle **NED-927** on enclosed inquiry slip

Bag-Type Dust Collector

Aget-Detroit Co.—Collection of dusts from food, wood, synthetics, metal and other industries is function of Dustbuster low cost dust collector, described and illustrated in 4-page bulletin 635. Specifications, ratings and recommended uses of bag-type unit are included.

For more details circle **NED-928** on enclosed inquiry slip

Steel Stamps—Marking Devices

Dickey-Grabler Co.—16-page bulletin depicts line of tools and dies and marking devices. Included are steel alphabet, number and symbol stamps made in several sizes with standard and reverse lettering, engraved steel hand and hammer stamps, machine stamps, roller marking dies, embossing dies, hand and machine type holders, multiwheel numbering machines and nameplate detail presses. Stock symbols are shown and specifications are given.

For more details circle **NED-929** on enclosed inquiry slip

Oil & Gas Combustion Equipment

Hauck Mfg. Co.—80 illustrations on 12 pages of catalog No. 52 show, in condensed form, construction and maintenance of line of combustion equipment. General information is given for all equipment. Data sheet No. 715 illustrates typical applications of high pressure air type oil atomizing inserts to Hauck gas burner nozzles.

For more details circle **NED-930** on enclosed inquiry slip

Handling & Production Equipment

Klaas Machine & Mfg. Co.—Various types of materials handling equipment built to individual specifications, including trucking service, special conveyors, tank storage, integrated conveyors, bucket elevators and others, are described and illustrated in 8-page bulletin "Aids to Modern Industry." Also covered are such production machines for metal forming and machining, heat treating, special assembling, testing and others.

For more details circle **NED-931** on enclosed inquiry slip

the *New* SAF-I-SPEC SAFETY SPECTACLE

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For more details circle **NED-932** on enclosed inquiry slip

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Much of the radar needed to scan the skies for our country's safety is being built from materials and parts carried to production lines in Convoy Chem-Board Tote Boxes. The self-stacking boxes illustrated seal their contents from dust and light . . . stack to ceiling without support.

Chem-Board is made of corrugated fibre-board, chemically-impregnated by Convoy's exclusive process. It is flint hard and rock strong. It is not weakened by moisture. It is impervious to machine oils. Convoy Tote Boxes cost and weigh 50% to 60% less than steel. The lightness, toughness and economy of Chem-Board Tote Boxes are unmatched. Tell us the style you use . . . we'll send a free production sample from the next run for you to test. As a guide for present and future availability, our current production capacity is reserved for the unprecedented demands from old customers and "DO" orders. Orders rated DO-MRO are acceptable. Write today.

Standard and Custom-made Nesting—Stacking—Vertical CHEM-BOARD TOTE BOXES

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For more details circle **NED-933** on enclosed inquiry slip

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For more details circle NED-935 on enclosed inquiry slip

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You get every dollar's worth with a Wayne—highest quality, guaranteed air output, nationwide service. Make your next air compressor a Wayne!

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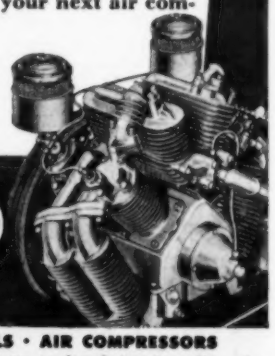

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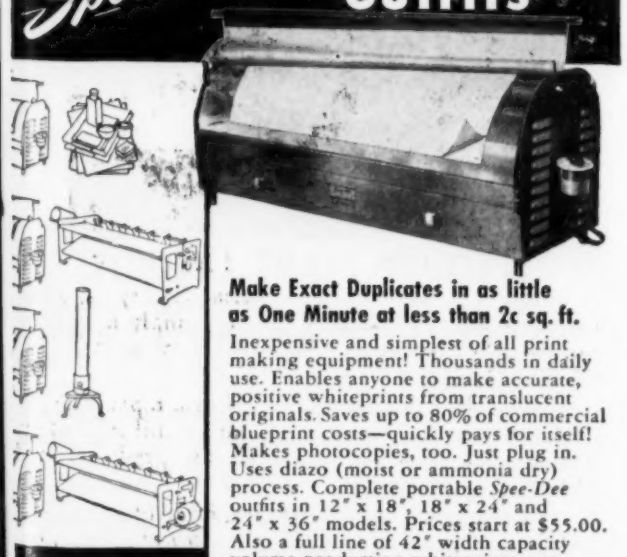

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For more details circle NED-937 on enclosed inquiry slip

New Literature & Catalogs

Vises of All Types

Desmond-Stephan Mfg. Co. — Complete line of Desmond-Simplex industrial, woodworkers and utility vises, plus the specs on each, are presented in 24-page illustrated catalog 60. Features and applications are covered. Machinists, bench and pipe, sheet metal, filers, positioning, drill pressing and milling machine and other types are included.

For more details circle NED-938 on enclosed inquiry slip

Wire Rope Clamp & Thimble

Newman Mfg. Co.—General information, design data and dimensions are included in 4-page folder on Newco wire rope clamp and thimble. Various models handle rope from ¼ to 1 in. diameter. Photo sequence shows application.

For more details circle NED-939 on enclosed inquiry slip

Cast Iron Electrical Boxes

Hope Electrical Products Co.—26 pages of construction details and lists of standard sizes are found in illustrated catalog No. 50A on cast iron boxes and fittings, junction and pull boxes, hinged cabinets, terminal boxes and explosion housings. Many custom modifications which can be made in standard boxes are shown. Ordering instructions and list prices are included.

For more details circle NED-940 on enclosed inquiry slip

Write-On-It Tape

Labelon Tape Co.—Now available in all-white form, this pressure sensitive plastic marking tape can be used for marking and identifying tools, parts, electrical circuits, cabinets, etc. Writing is by pressure of the writing instrument, whether it be pencil, pen or stylus. It does not smear. Tape is described in 6-page illustrated folder and some uses are shown.

For more details circle NED-941 on enclosed inquiry slip

Sectional Laboratory Furniture

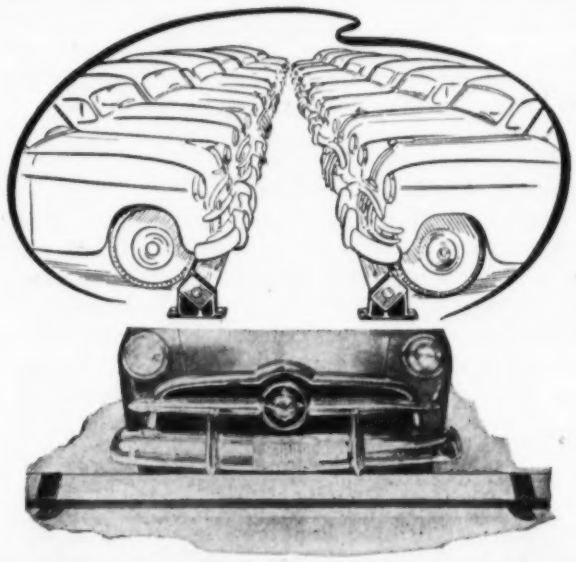
Labline, Inc.—Seventeen basic units are offered in line of sectional laboratory furniture, described and illustrated in 6-page bulletin F-152. Each unit is standardized. Among units included are: drawer, cupboard, sink, table, floor storage case, refrigerator and others. Choice of stainless steel, treated birch or Alberene working tops is given and construction details are included.

For more details circle NED-942 on enclosed inquiry slip

Electrical Control Thermometers

Minneapolis-Honeywell Regulator Co., Brown Instruments Div.—Recording and indicating circular case electric control industrial thermometers for temperature control on drying ovens, cooking kettles, lumber kilns and plating tanks are described in illustrated catalog 6482. Included is information on switching actions, chart and scale ranges and bulb and tubing variations.

For more details circle NED-943 on enclosed inquiry slip



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13. You always stop against your tire—no shock.

Send us a plot plan of your parking lot—we do the engineering free.

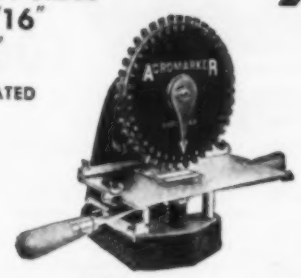
HARRIS-BARRIER INC. 6407 N. PENNSYLVANIA STREET INDIANAPOLIS 5 · INDIANA

For more details circle NED-944 on enclosed inquiry slip

ACROMARK MEANS "ACCURATE MARKING"

THE ACROMARKER NAME PLATE AND PARTS STAMPING MACHINE COMES IN SIZES FROM 1/16" TO 3/16"

HAND OPERATED AND FOOT MODELS



NON-TIRING FAST-MAKES PERFECT STAMPING OF LETTERING & NUMBERING EASY AS DRIVING A CAR

DIE WHEELS AND DIES ARE REPLACEABLE.

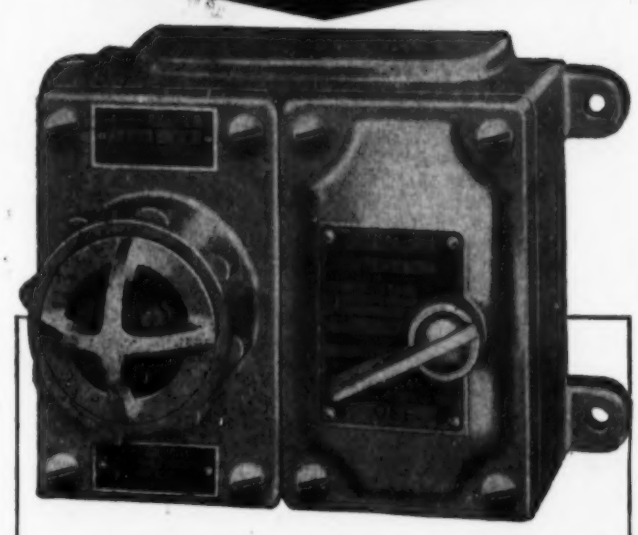
The ACROMARK Company

7-11 MORRELL ST., ELIZABETH 4, N. J.

"THE ORIGINAL MARKING SPECIALISTS"

For more details circle NED-945 on enclosed inquiry slip

R&S EXPLOSION-PROOF EQUIPMENT



The wide variety of R&S explosion-proof equipment includes many standard enclosures—compact units possessing a high degree of flexibility and "packaged" safety. Circuit Breakers, EFS Switches, Push Buttons, Pilot Lights, Motor Starters, Combinations and individual Panels up to 32 circuits ...all have slide operating mechanisms, removable front covers, abundant wiring space and conduit outlets...along with individual features that meet all standards, *plus!*

R&S custom-built panelboards composed of standard enclosures factory assembled, sealed and tested, offer many advantages over special designs and field assemblies.

WRITE FOR CATALOG H-47-15

RUSSELL & STOLL COMPANY, INC.
125 BARCLAY STREET · NEW YORK 7, N. Y.

C4

RUSSELL & STOLL

PRECISION-BUILT ELECTRICAL EQUIPMENT—SINCE 1902

For more details circle NED-946 on enclosed inquiry slip

MOTOAIR PUMPS for VACUUM

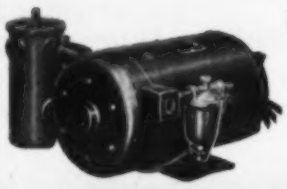
FREE AIR CAPACITY 2½ to 35 CUBIC FEET/M

COMPACT!

820

SAVE SPACE! Motoair, with its motor is ONE integral unit, making it ideal as a self-driven accessory on machines for packaging, labeling, filling, capping, etc. Used for vacuum frames, web-guiding, fluid evacuation, paper handling and graphic arts machines.

Rotary type; its blades compensate for their own wear. No pulsation. Automatic, visible, filtered lubrication. Made in various sizes.



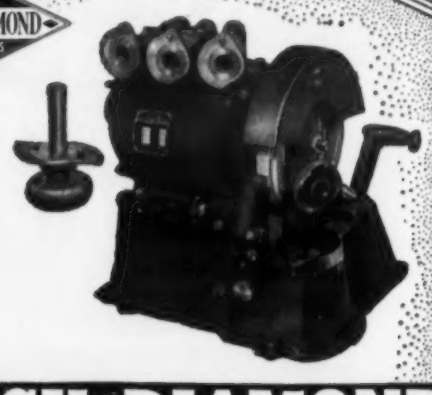
NO BELTS; NO GEARS; visible lubrication. NO COUPLINGS

Ask for Catalog Details!

NEW JERSEY MACHINE CORPORATION
1530 Willow Ave. • Hoboken, N. J.
Factory offices in Chicago, Cincinnati, Los Angeles

▲ For more details circle NED-947 on enclosed inquiry slip ▲

TOOLS BLACK DIAMOND GRINDERS



BLACK DIAMOND
PRECISION DRILL GRINDER

FOR PRECISION SHARPENING OF ALL SMALL DRILLS—TO REDUCE DRILLING COSTS, DRILL BREAKAGE AND WORK REJECTS AND TO CONSERVE SKILLED LABOR EVERY MACHINE SHOP NEEDS A BLACK DIAMOND

Black Diamond Grinders cut 50% and more on drill sharpening and drilling costs. They sharpen small drills so efficiently and accurately that drill breakage and work spoilage are tremendously reduced.

Anyone can operate a Black Diamond, can keep all small drills sharp—and true centered with smooth lips accurately ground to the same length, correct angle and clearance for fast, precision drilling.

The built-in Diamond Point Dresser, is instantly available to keep the grinding wheel sharp cutting and the Web Thinning Attachment cares for all types of Notched Points.

If you use small drills, singly or in gangs, this moderately priced grinder will keep any quantity sharp, always ready for use. You should own a Black Diamond. Write for New Bulletin.

BLACK DIAMOND SAW & MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

▲ For more details circle NED-948 on enclosed inquiry slip ▲

M&M
GIANT KEYSEATERS

M & M Giant Keyseaters, built in a wide range of sizes, speedily and accurately cut internal keyways or splines in the bores of pulleys, gears, fly wheels or any other machine part. Special fixtures and cutters are available for unusual shaped keyways and taper work. Send us your problems today.

MITTS & MERRILL 68
1000 South Water • SAGINAW, MICH.

▲ For more details circle NED-949 on enclosed inquiry slip ▲

New Literature & Catalogs

Corrosionproof Cements

Atlas Mineral Products Co.—Graphic charts showing temperature range of each of four basic types of corrosionproof cements and their specific resistance to 176 common chemical materials are found in 12-page illustrated bulletin No. 5-2. Estimating tables and three principle acidproof brick and cement constructions are shown.

▲ For more details circle NED-950 on enclosed inquiry slip ▲

Elevated Water Tanks

Pittsburgh-Des Moines Steel Co.—20-page brochure 101 contains 50 installation photographs and data on five types of elevated steel tanks ranging in capacity from 5000 to 3,000,000 gallons. Tanks are recommended for private and public water systems, industrial and institutional water supply and storage and other purposes.

▲ For more details circle NED-951 on enclosed inquiry slip ▲

Controllable Capacity Pumps

Aldrich Pump Co.—Applications, features, design and operation of Aldrich-Groff Powr-Savr controllable capacity pumps are described in 8-page illustrated data sheet 65A. Sectional and dimensional drawings, ratings and diagrammatic layouts of automatic hydraulic stroke-control system are given.

▲ For more details circle NED-952 on enclosed inquiry slip ▲

Adhesives, Coating & Sealers

Minnesota Mining & Mfg. Co.—Types of adhesives, coating and sealers used in aircraft manufacture and maintenance are described and some of their applications are shown in 12-page booklet. Such products as strippable coating for surface protection during fabrication and integral wing tank sealers are covered.

▲ For more details circle NED-953 on enclosed inquiry slip ▲

Air Conditioning Equipment

Westinghouse Electric Corp.—60-page illustrated catalog 600 of Westinghouse-Sturtevant products for air conditioning, cleaning and handling is divided into three sections: 21 pages on equipment; 14 pages on applications; and 16 pages of engineering data. A "Quick Finder" chart simplifies problem of selecting right piece of equipment for the job.

▲ For more details circle NED-954 on enclosed inquiry slip ▲

Babbitting Practice Hints

American Smelting & Refining Co., Federated Metals Div.—Basic steps for prevention of common bearing failures are outlined in 12-page illustrated bulletin No. 146 "Hints on Babbitting Practice." It covers everything from choice of metal for a particular application through the correct pouring practice to in-service maintenance.

▲ For more details circle NED-955 on enclosed inquiry slip ▲

Portable Electric Tools

Ingersoll-Rand Co.—Over 100 different sizes and types of Multi-Cycle electric tools are described in 36-page illustrated catalog 5111. Eight sections deal with Impactools, nut runners, drills, screw drivers, grinders, buffers, sanders and polishers. Both 180 and 360-cycle models are described.

▲ For more details circle NED-956 on enclosed inquiry slip ▲

Gravity Roller Conveyors

Harry J. Ferguson Co. — The various types of Streamliner gravity roller conveyors made by this company are described and illustrated in 12-page bulletin No. 100. Included are Turn-It-Over conveyor and other types, plus accessories. Specifications and construction details are given.

▲ For more details circle NED-957 on enclosed inquiry slip ▲

Valves & Tapping Machines

Beckett-Harcum Co.—Two illustrated bulletins cover line of Hi-Cyclic air and hydraulic operating valves and Beckett drilling and tapping machines. Bulletin No. 10-A describes valves, including reciprocating, spring-loaded, hand-operated, solenoid, air time-delay and piloted types. Bulletin No. 15 covers line of bench, pedestal and multiple spindle table type drilling-tapping machines.

▲ For more details circle NED-958 on enclosed inquiry slip ▲

High Pressure Valves

Edward Valves, Inc.—Univalve integral seat all-purpose forged steel valves for 1500 and 2500 psi service in ½ to 2-in. sizes are covered in illustrated 8-page catalogue 12-Gl.

▲ For more details circle NED-959 on enclosed inquiry slip ▲

FRANKENMUTH 5, MICHIGAN

▲ For more details circle NED-960 on enclosed inquiry slip ▲

No more running out of drills—your entire stock can be seen at a glance. Each size of drill has its own compartment with rounded bottom for easy selection. You can store dozens of small drills and several large ones in their own compartments. Built-in pricing or inventory system eliminates the need for cost sheets, and will keep a record of drills on hand. Stack two or three cabinets to save space. *Specifications:* 14½" long, 7¼" high, 7¼" deep. Hammerlin baked enamel finish over rugged steel.

Made in three models for fractional, number or letter drills.
Write for Circular

HUOT MANUFACTURING CO.
HUOT is Pronounced "HEW-OT"
571 No. Wheeler St., St. Paul W4, Minn.

▲ For more details circle NED-961 on enclosed inquiry slip ▲

NEW LAYOUT TAPES BY CHART-PAK

SPEED-UP PLANT LAYOUTS

Now you can "draw" material conveyors, structural components, center lines, etc. simply by unrolling printed self-adhering tapes and mounting them on your layouts.

With the CHART-PAK predrawn tapes your layouts can be more precise and more uniform. Many different symbols are available, all predrawn and ready for application.

Available too, is the CHART-PAK plastic board. This is transparent and has ¼" grid lines. The plastic surface provides for reuse of board and for ease in making changes or corrections, simply by peeling off old tapes and replacing with new ones.

With CHART-PAK you will have faster planning and better layouts, at lower costs.

For more detailed information, write to

CHART-PAK, INC. 104-A LINCOLN AVE. STAMFORD, CONN.

▲ For more details circle NED-962 on enclosed inquiry slip ▲

FOLD • SEAL • MAIL

Have You Filled In Your Name and Address?

FOLD TO THIS LINE

To obtain additional information on any items in this issue of NEW EQUIPMENT DIGEST, circle numbers below which correspond with those of desired items. Your request will be forwarded promptly to manufacturer. Please give your name, title, company and address. This postage-free mailer should be folded as indicated for mailing.

	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
1	51	101	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001
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37	87	137	187	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987	1037
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92

NAME ..... TITLE .....

COMPANY ..... Approx. Number of Employees .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

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Cleveland, Ohio

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Principal Products Manufactured .....

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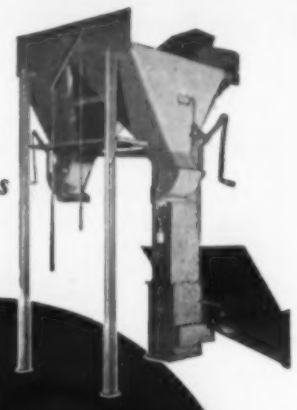
Also send NEW EQUIPMENT DIGEST free to the following men in our company:

NAME ..... TITLE .....

NAME ..... TITLE .....

the
HANDY SANDY
gives you 7 advantages
THAT MEAN LOWER COST SAND HANDLING FOR YOU



fits any foundry

1. Puts the Sand Pile Overhead
2. Eliminates Shoveling and Waste Motions for the Molder
3. Increases Molders' Output
4. Savings From First Unit Pay for the Next Unit
5. Improves Condition of Sand
6. Takes Little Space
7. Low Cost — Simple to Install

write for bulletin No. 205

NEWAYGO ENGINEERING COMPANY
NEWAYGO, MICHIGAN

▲ For more details circle NED-963 on enclosed inquiry slip ▲

Empco JACK STYLE JS
NEW MACHINE LEVELING DEVICE

Locates on anchor bolt.
Self-aligns to uneven floor.
Easily lifts 8,000 lbs.
Simply turn adjusting nut to raise or lower machine.
VI-SORB mounting pads absorb vibration.

Where anchor bolts are used, this new Empco Jack Style JS will save considerable time in setting and keeping equipment level.

Tested to support 20 tons and lift 8,000 lbs., this Empco Jack is the answer to any machine installations. Anchor bolt hole through the jack assembly allows clearance for ¾" diameter bolt. This permits the Empco Style JS Jack to be used at the *precise spot* where equipment was designed to be best supported.

Available in three sizes: 1¾", 2", and 3" (minimum heights) with VI-SORB mounting pads as optional equipment.

Write for specifications and prices of the complete line of Empco Leveling Jacks today.

EMPCO PRODUCTS

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

▲ For more details circle NED-964 on enclosed inquiry slip ▲

PUMP HIGHLY CORROSIVE FLUIDS SAFELY!

NEW POLYETHYLENE PUMPS
WITH NATURAL RUBBER, GUM, NEOPRENE, BUNA, HYCAR
"flex-i-liners"

NO STUFFING BOXES!

ESPECIALLY DESIGNED TO HANDLE HCl, HF, NaOH, H_2SO_4, DISTILLED H_2O, $FeCl_3$, $Ca(OH)_2$ and many others

Fluid only contacts outer surface of "FLEX-I-LINER" and inner surface of body block. 35 combinations of rubber and plastic "flex-i-liners" and pump body blocks. Models available from fractional to 20 G.P.M., Vinyl and Compar "flex-i-liners" also available in pumps to 5 G.P.M. capacities. Widely used in chemical, food, pharmaceutical and other process industries—wherever non-contaminating pumping is required. Excellent for slurries. Write for literature.

FLUID NEVER TOUCHES METAL
NO GASKETS
NO VALVES
SELF LUBRICATING

VANTON PUMP CORP.
EMPIRE STATE BLDG., Dept. NE-9, New York, N. Y.

VANTON NON CORROSIVE CONTAMINATING flex-i-liner PUMPS

▲ For more details circle NED-965 on enclosed inquiry slip ▲

New Literature & Catalogs

Oil Hydraulic Equipment

Superdraulic Corp.—Products of this company are described and photos and layout drawings of typical hydraulic designs it has produced are included in catalog "Oil Hydraulic Equipment." Hydraulic system components include pumps, cylinders, motors, transmissions, valves, remote controls, presses and power units.

▲ For more details circle NED-966 on enclosed inquiry slip ▲

Thermosetting Plastic Sheet

Homalite Corp.—Fabrication, maintenance and installation of CR-39 clear thermosetting plastic sheet is outlined in 12-page booklet. Material resists breakage, scratching and chemical attack and does not yield under high temperature. Tabulation of physical, chemical and electrical properties as compared with cast methacrylate and plate glass is included.

▲ For more details circle NED-967 on enclosed inquiry slip ▲

Scales, Scales, Scales

Howe Scale Co.—Condensed scale catalog No. 11 includes a selection of 1000 standard scales weighing from 1/64-oz to 400 tons. Specifications, illustrations and essential information are included. It is arranged by types of weight indication. Included are scales with beam indication, tape-drive dial, Weightograph projection and Teleprint electronic remote weight recorder.

▲ For more details circle NED-968 on enclosed inquiry slip ▲

Bulk Material Dryers

Link-Belt Co.—Information on drying, cooling and processing of bulk materials is contained in 24-page illustrated book 2409 on Multi-Louvre dryers, used in coal, food, chemical process and fertilizer industries for fast treatment and accurate temperature control. Typical layouts, dimensional data and description of operation are included.

▲ For more details circle NED-969 on enclosed inquiry slip ▲

Expansion Joints

Flexonics Corp.—As described in 8-page illustrated bulletin, line of Flexon expansion joints has been redesigned to accommodate increased expansion with fewer corrugations. Specifications and installation data for free-flexing joints for low pressure, controlled flexing for high pressure and Flexoniflex joints for extremely high pressures are included.

▲ For more details circle NED-970 on enclosed inquiry slip ▲

Mild Steel Welding

McKay Co.—Procedure for welding mild and low alloy steels plus complete information on electrodes available for such welding is given in 48-page handbook "Welding of Mild Steels." Electrodes covered are designed for hard surfacing and repair welding as well as for cast iron welding. Specifications, properties and uses are briefly presented.

▲ For more details circle NED-971 on enclosed inquiry slip ▲

THOMAS
MAKES 1000 DIFFERENT KINDS OF CASTERS & WHEELS
Write for complete catalog and price list

THOMAS TRUCK & CASTER CO.
320 MISSISSIPPI RIVER
KEOKUK, IOWA

▲ For more details circle NED-972 on enclosed inquiry slip ▲

STOP HYDROSTATIC PRESSURE LEAKS THROUGH CRACKS or HOLES IN UNDERGROUND WALLS with SEEP-SEAL

STOPS THE LEAK IN 2 MINUTES

Water seepage, even hydrostatic pressure leaks, commonly found in underground concrete structures, are no longer a difficult problem to overcome. A simple, quick and most effective remedy is found in Seep-Seal. This amazing new formula, mixed with Portland cement, and inserted in any crack or actual hole in concrete, will set within 2 MINUTES to shut off ALL leakage. Ideal for manholes, elevator pits, reservoirs, subways, mine-shafts and similar structures. Also widely used in plaster-consistency for damp-proofing floors and walls.

Write for complete details and prices today. Immediate shipments

ROCK-TRED Corporation
Manufacturers of a Complete Line of Building Maintenance Materials
7440-7450 North St. Louis Avenue • Skokie, Illinois
In Canada: Rock-Tred Corporation (Canada) Limited, Toronto 5

▲ For more details circle NED-973 on enclosed inquiry slip ▲

Why Good Mechanics Demand RIDGID
New No. 40 TRISTAND Pipe Vises

Handy tray keeps your tools at your fingertips

★ Tristand is really a portable workbench with a vise—roomy top tray has pipe benders and pipe rest; tool tray below keeps tools handy.

★ That tool tray also makes Tristand extra rigid—won't fold up in use.

★ LonGrip tool-steel vise jaws won't slip, are easy on polished pipe or tubing.

★ No. 40 yoke vise Tristand is 2½" capacity, No. 45 chain vise 4"—buy these work-saver RIDGIDs at your Supply House!

THE RIDGE TOOL COMPANY • ELYRIA, OHIO

RIDGID Work-Saver Pipe Tools

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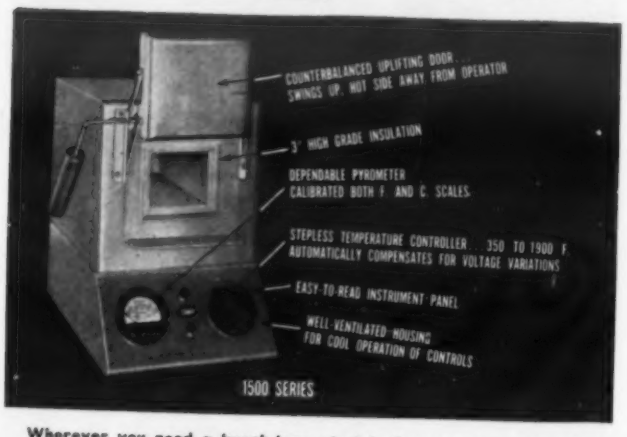

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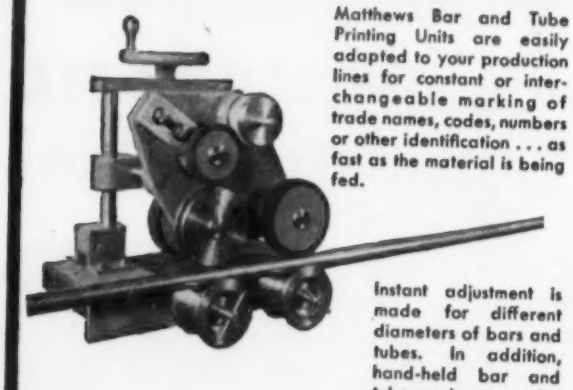

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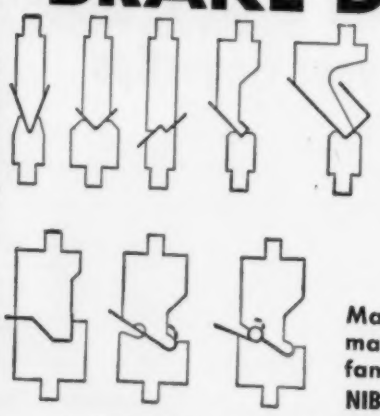

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SEPTEMBER, 1952

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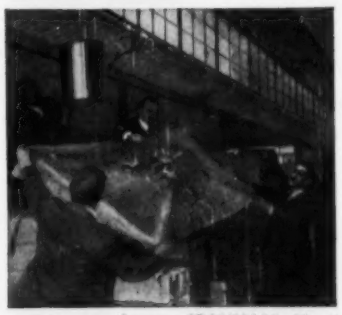

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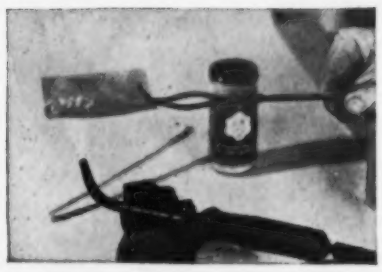

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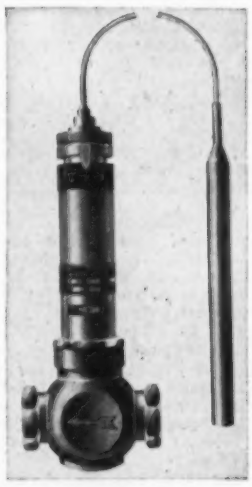
handle noncorrosive fluids, vapors



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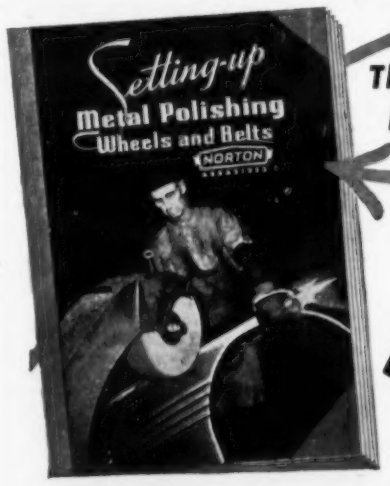

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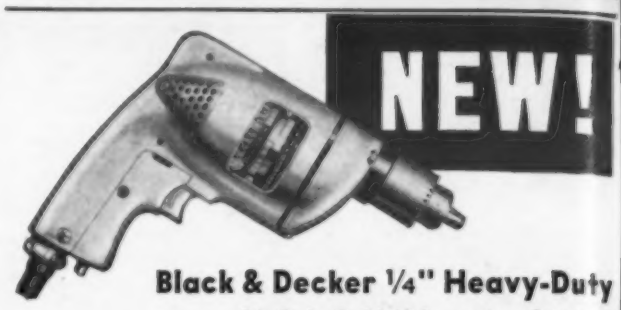

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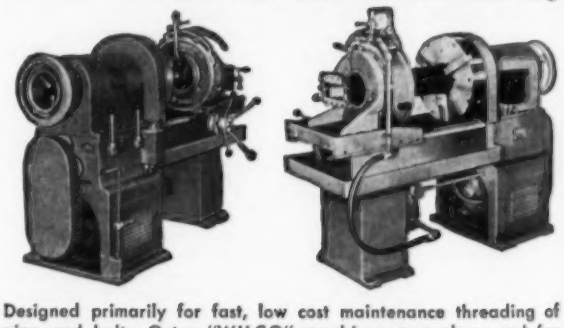

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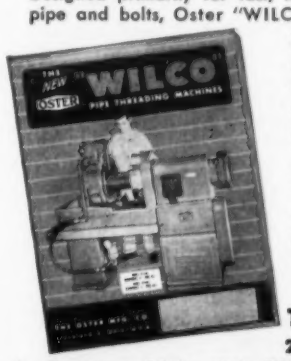

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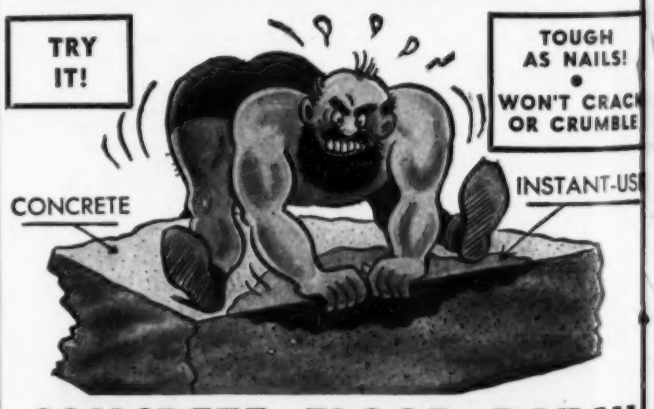

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